THE ETHICS OF HERCULES

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THE ETHICS OF HERCULES

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THE ETHICS OF HERCULES

A Study of Man's Body as the Sole Determinant of Ethical Values

BY

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DEDICATED
TO
THE THOUSAND MEN
OF MY GENERATION
WHOSE THOUGHT I HAVE THE HONOR
OF MAKING ARTICULATE.

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"Waste not free energy; treasure it and make the best use of it."

WILHELM OSTWALD, *"The Imperative of Energetics."*

PREFACE

This book deals with ethics as a strictly natural science, and particularly as a branch of mechanistic psychology. It regards the realm of ethics as coterminous with the arena of human activity, and holds that the problems of conduct, being exclusively man's problems, are to be solved by the methods of applied science. Moreover, since human conduct is in the last analysis dependent upon the postures and manœuvres of our muscle-fabric, he who would understand ethics must first comprehend something of the mechanics of the human organism. Indeed, this book attempts to show, not only that ethics and physiology can no longer be studied apart from one another, but also that it is the structure and functions of the human body which have determined just what our ethical values are.

Such a program is not strictly original, for the student of philosophy will readily find its antecedents. Nevertheless, while many ethical writers have heretofore given numerous intimations of a mechanistic scheme in ethics, yet usually as they proceed to discuss what are called higher things, they seem to forget that it is the human body which performs every human action, even those deeds which

move us most profoundly. No such faltering, we trust, will be found in these pages. Indeed, it may be stated at the outset that one of the fundamental conceptions from which this book originated is that the well-being of the physiological organism is the final criterion of whatever is ethically valuable.

The title, "The Ethics of Hercules," is doubly symbolical. Those who have heard of this ancient hero will immediately recognize the emphasis which is placed upon that type of personality who with strength, skill, and persistence works out the problem that lies nearest at hand. Moreover, Hercules the valiant, the thoroughbred who never once shirked from his task, is here contrasted with Cinderella, the patron goddess of all those ineffectual dreamers, who, instead of balancing their ethical books day by day, whimper after the supernatural, and cultivate an inner life of subterfuge and disorder. We hold here that no man can have freedom given to him, but that he must earn it by positively constructive, honest efforts to adjust himself to and gain control of his environment. The motto of Cinderella is, "Where you are not, there is happiness," while the motto of Hercules is, "Friends lost, something lost; honor lost, much lost; pluck lost, all lost."

The realization that in all science many false starts are made before a single true one is achieved, makes for caution and vigilance. Seeing, however, that the trend of ethical thought has been continu-

ally growing more and more mechanistic, it seems not unlikely that we are at the beginning rather than at the end of a chapter in the empirical science of human nature. If this book utters no more than the first sentence of that chapter, the effort will not have been in vain.

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THE ETHICS OF HERCULES

CHAPTER I

INTRODUCTION

It would be an impertinence for an amateur in physiological science to assert that the significance of ethical values can be understood only through a study of the mechanics of the human body, were not the ethical implications of physiology so numerous, so compelling, and so plainly apparent. Ever since anatomists and physiologists first began to demonstrate that all the vital functions of man were dependent upon his intimate structure; and more recently that conduct and thought are in the strictest sense of the term functions of man's flesh, they have been laying the foundations,—even if unconsciously,—of a scrupulously natural science of ethics. The purpose of this book is to attempt the formulation of such a science.

There is little need to state that any proposal to deal with ethics in a thoroughly naturalistic manner will be met with considerable resistance. Although it has been everlastingly recognized that human conduct is the direct product of human bodies, especially as is evidenced by our bestowal of rewards and punishments on individually specified persons,

nevertheless, the opinion still widely prevails that a man and his actions are two such different things that the former cannot be defined in terms of the latter. Against this naturalistic or mechanistic view,—that a man *is* what he *does*,—several classes of people tenaciously hold contradictory opinions.

There are, for example, those who consider ethics as the humble handmaid of what is curiously termed "revealed religion," and who consequently hold that all the knowledge necessary for the conduct of life has long ago been vouchsafed us by Infallible Wisdom. To such persons it is of no importance that human nature has actually altered to such an extent as to make it necessary to find new solutions even for ancient problems; nor does it seem to occur to them that the homage devoted to the past may often be simply a pleasant way of escape from the intellectual responsibilities of the present. A mechanistic ethics plans to undermine the notion that the ethical truth of one generation is necessarily sufficient for the problems of the generation that succeeds it, and aims to supersede it with the view that man's progress is dependent, not upon his ability to escape from his problems, but rather upon his ability to analyse and solve them.

Again, there are those who regard ethics solely as a subject for philosophical discussion on the basis of an ideal never illustrated by any one man, but only conceived in abstract terms. "How should the ideal man behave?" is the sole burden of their

discussion. Even the mechanist hesitates to condemn this esthetic attitude toward conduct too severely. For it is well known that thinking may involve preparation for action, and that consequently he who thinks out the best course of conduct in advance may be more likely to act accordingly when a real problem is to be solved. On the other hand, the human body and brain are so constructed that all fanciful romancing is necessarily tinged with delusion to such an extent that he who conceives an ideal apart from the actual is bound to lose his orientation. And the sequel of this loss is everywhere manifest in purely philosophical discussions about ethics. In the effort to extricate themselves from the verbalism in which they are entangled, ethical theorists have invariably either rejected the world as evil, or else they have dug themselves in under a mountain of meaningless words. To all such persons a mechanistic ethics seeks to restore a glimpse of the reality they have sought in vain, by showing that the highest ideals need not be in any way fictitious.

Resistance to a naturalistic ethics may also be expected from those biologists and physiologists who regard the human body essentially as a corpse animated by a psyche. These people are known as vitalists, and their number is very great. The customary gloom of these men is doubtless derived from their attitude toward the human body, which they know best either in the form of specimens

preserved in alcohol, or microscopic slides of slaughtered tissue. Now, to be sure, such objects of intense study do not of themselves yield an adequate picture of a living, thinking man. But these morphologically-minded persons, instead of pertinaciously remembering what manner of organism they have slain for research, and instead of keeping ever in mind that all human tissues actually die while performing their normal functions, deem it somehow necessary to postulate a vital, that is, an immortal principle, which makes the organism *go*. A more perverse logic does not arise even in the realms of theology. Oddly enough, the conversation of these men is not so happy as their metaphysic might indicate. "No, no," they will repeat in a plaintive outcry, "you can never find the secret of life." The sentiment underlying such a remark is not difficult for even a casual student of psychology to detect. Moreover, logicians know that when a man states a problem in terms of a mystery, and seeks thereby to hinder the search for its solution, he commits an error which has been called "the fallacy of initial predication." [1] Obviously, indeed, we have already found out fully a thousand of the secrets of living matter,—for instance, its principal chemical ingredients, its dependence upon oxygen, its optimal temperature, its rate of dying with different vital organs removed, and the like,—and so when a vitalist speaks of "*the* Secret of Life,"

[1] R. B. Perry, "Present Philosophical Tendencies," p. 127.

he simply shows that he is still a worshipper of magic. Although the way of intellectual progress lies in another direction, yet, since the majority of mankind court mystery as a way of escape from the "despotism of fact," the vitalist can be expected to lead a voluble resistance against a mechanistic ethics. Nevertheless, even he can perhaps be induced to recognize that although Psyche does seem to regulate Homo, yet it is always the structure of Homo that determines what manner of function he shall manifest. And if the mechanist can elicit this admission from the vitalist, he can at least maintain his chief contention. Otherwise, seeing that the mechanists are on the whole younger men than the vitalists, nature's own slow processes will have to soften the asperities of this conflict.

Having thus begun our outline of a mechanistic ethics by stating the chief points of its disagreement with certain traditional ways of thinking, let us now proceed to establish without interruptions the foundations upon which this science of human conduct is to be built. And first a word as to its antecedents.

All modern scientific thinking, which is essentially a pertinacity of attention,—a dogged following upon a clue sagaciously intuited,—is our heritage from ancient Greek thought, and particularly from Socrates. And it is quite a significant, though oft-forgotten fact, that while almost all our scientific inquiry has been directed toward the conquest of

physical nature, Socrates himself scorned to devote his powers to any but the subjects of ethics and the theory of knowledge. It is, then, something like a return to the chief interest of Greek life to employ the methods of general science in the analysis of the ethical problem. "Know *thyself*" was the well-known motto of Socrates; but it has required an infinitude of other knowledge before we could see clearly enough to know ourselves. Nevertheless, we may now say that in thus employing modern science strictly in the interest of ethics, the homage to Socrates is no less profound than the implied confidence in the trend of that civilization which originated in his brilliant mind.

The antecedents of a naturalistic ethics, however, are not all located in one man. With varying emphases, we find similar tendencies appearing in Aristotle, in Leonardo da Vinci, in Hobbes, in Spinoza, in John Stuart Mill, in Herbert Spencer, and in many other wise and kind men. Today this same influence is more aggressive and expanding than ever before. Lucien Levy Brühl, Edwin Holt, John Dewey, William Morris Davis, George Clarke Cox, and Roy Wood Sellars are typical representatives of the movement devoted to making ethics as objective as the science of mechanics. Consequently it would seem that the attempt we shall make here to define ethical values in terms of man's biological functions is not a forlorn hope, either

historically unforeseen, or lacking contemporary sympathizers.

What, then, is implied by the statement that ethical values are to be defined in terms of man's biological functions? In the first place, we imply that just as man's body, by means of brain, sense organ, muscle and gland, makes, upon stimulation, all the mind it ever manifests, so likewise that same body of man, through the mechanisms just enumerated, creates ethical notions. That is to say, the realm of ethics is coincident with the realm of human behavior in so far as that behavior is judged to be good or bad, right or wrong, virtuous or vicious. Now the body of man performs many and various functions, some of which are called physical, some chemical, some mental, and some ethical; and any structure of man's body, such as an arm or a leg, can be shown to perform all these four types of function at the same time. Such a statement will cause no surprise to those who have followed the trend of psychological and ethical theory in the last decade. And while it is obviously impossible to prove any theory to the negatively suggestible obstructionist, it is a very hopeful sign that today great numbers of even untutored men are disbelieving in the transcendence of mental and ethical qualities, and are relocating them among the natural phenomena of the world. Hereafter, then, we shall also understand ethical values to be achievements of

man's mind, which is a function of his protoplasm, which is a function of the sun.

A second implication of our basic assertion is that since our knowledge of man has, after a hundred false starts, just recently become in any way accurate, so must our views on ethical questions be regarded as still in the infancy of their truth. Moreover, just as scientific inquiry in every other field is subject to revision upon each new discovery of signal importance, so must ethical science, during the period of its infancy, be subject countless times to an equally sweeping revision. In other words, the scientific attitude toward ethics forestalls any attempt or wish to draw on some phantom bank account to eke out the ethical resources of mankind, insufficient though such resources may at times appear to be. He who, like the mechanist, believes that virtue is a strictly natural phenomenon, must not carry a-priori standards into his work, but must believe that an accurate description of human nature will furnish all the necessary data for an applied science of human conduct. To be sure, since man is a creature who likes and dislikes, who prefers and rejects, this very fact precludes an ethics without any mention of ideals of one sort or another. Nevertheless, it is our particular business here not to establish or insist on any set of ideals in advance of an empirical study of human conduct, for it may well be that what we call our highest ideals are, in

the light of science, in need of considerable revision.

With this by way of introduction, we shall at once proceed with the work already proposed. And just as a new proprietor of an old business begins by taking inventory, so shall we at once take stock of the ethical resources of man. Our method for the time being will be the method of the statistician. Following the arrangement of our data as we find them, we shall first seek to answer that most interesting and, indeed, fundamental question, namely, Why do our ethical judgments always occur in pairs of antonyms? This enquiry will bring us to the very center of the ethical problem. Next we shall ask just what our ten principal ethical concepts really mean, and shall seek to discover their relationships to one another. Finally, we shall endeavor to show how the knowledge thus derived, when combined with insight into the mechanics of body and mind, furnishes us with an ethical technique which transcends both in scope and effectiveness all that we have hitherto possessed.

CHAPTER II

A PHYSIOLOGICAL EXPLANATION OF THE ANTAGONISM BETWEEN ALL SUCH WORDS AS "GOOD" AND "BAD," AND "RIGHT" AND "WRONG"

"A word is the shadow of an act."
DEMOCRITUS.

It is a fact of the greatest significance that the words by which we convey our ideas of value always occur in pairs, one of which is the opposite of the other. In esthetics the beautiful is contrasted with the ugly, and the charming with the disgusting; in logic the true clashes with the false, and in philosophy the real with the unreal; in matters of public and private economy the cheap is antithetical to the expensive, and the generous to the miserly; while in ethics we constantly hear the words good and bad, right and wrong, virtuous and vicious employed to denote the opposition and contradiction of human interests and ideals. What is the ultimate reason why we thus employ such pairs of antonyms in our judgments of praise or blame, our expressions of desire or aversion, and in our estimations of merit or defect?

This modern question, upon which the founding of a true science of ethics depends, cannot be an-

swered by any appeal to the speculative metaphysics of bygone generations. We have passed out of that period in which men were content with an explanation based on the Zoroastrian hypothesis of a world divided between the warring forces of light and darkness, while our ears are now equally unresponsive to the bi-polar principles of love and hate which Empedocles propounded. Even our recent Emerson's "Law of Compensation," born though it was of canny, scientific thinking, is not marked by the least sign of that finality which the answer we seek should possess. It is, indeed, our conviction that the presence of antonyms in human speech is not to be accounted for by the assumption of a theory concerning the world as a whole, but rather by an examination of some of the baldest facts of our everyday experience. Nay more, it is our declared purpose to show that the metaphysical and theological notions of Empedocles and Zoroaster are themselves to be explained by reference to the physics and the physiology of man,—in terms of the structure and functions of the human body. But before we can comprehend the significance of such a thesis, it is first necessary to understand some of the physiological mechanisms underlying thought and speech.

The Rise of Mechanistic Psychology

Ever since William James employed the phrase "the *stream* of thought" to describe mental phe-

nomena, the whole trend of psychology has been altered. Not only did the wide-spread use of that phrase result in the giving up of many traditional beliefs in regard to things mental, but it also stimulated the most profitable investigations in psychological science. One of the most ancient of the beliefs which it demolished was the belief in Ideas as eternal, external, and immutable. According to the notion of a stream of consciousness (itself a variable conception), ideas are sensory images which show individual variations, which never are exactly repeated, and which have meaning only when they refer or lead to some concrete reality. This view, which finally replaced the ancient Platonic conception, is now held by practically all psychologists. Moreover, the influence of James' teaching was such as to show that will, intellect, feeling, and the like were not separable parts of a mind (i. e., faculties) which were capable of acting independently, but were merely handy words to indicate the various qualities of the stream of thought. The stream flows swiftly,—call that impulsiveness; it flows again broadly and deeply with many glancing eddies,—call that deliberation; it flows once more with swift descent and foam,—call that strong feeling. Nevertheless, the stream of thought is one stream, and mental phenomena one and all specify its labile and fluid consistency. And now let us see to what further developments this striking conception has led.

Obviously, the astute, enquiring person at once asks, "What makes this stream of thought? To what is its flowing character due?" At first it might seem that one must despair of any satisfactory reply. One feels as did William Harvey, almost hopeless in his quest after the secret of the circulation of the blood. But just as Harvey boldly experimented with his eye on the critical features of his problem, so have a multitude of keen investigators devised test after test to discover the laws of mental phenomena. And while we cannot yet say that "Science has laid her doomful hand" upon all of the intricate secrets of mind, nevertheless, it is becoming more and more certain that the stream of thought is just as much a bodily function as is the breath-stream and the blood-stream. Strangely enough, this conception is not brand-new. It was Aristotle who said, "If the eye were an organism, vision would be its soul." Similar thinking is revealed in our modern view that mind is a function of the body, and that it depends upon the body for its existence. It "is generated by the body as the result of its immediate contacts with the environment, in much the same way as electricity may be generated by a turbine that has been placed in the midst of a tumbling waterfall." Moreover, the stream-like character of thought, the play of feeling, the linger and strain of deliberation and expectation are due to the manner in which the storage battery of the brain releases energy, and to the

way in which the muscles and glands transform it. William James wrote in 1890, "All consciousness is motor," that is, it is dependent upon the expression mechanisms of the body; and today we have demonstrated the fundamental rôle of the muscles and glands of the body in "the transformation of the common energies of nature into the special energies of mind."

It can be seen at once that such a philosophy of mind furnishes the most striking and far-reaching ethical implications. If what we call our mental life turns out upon close inspection to be dependent upon bodily functions, it follows that conduct and thought differ only in the degree to which the body is excited to activity (molar motion). In a word, conduct is overt (visible), while thought is covert (invisible), behavior. Edwin Holt, in the "Freudian Wish," speaks of thought ('wish' as he terms it there) as *"a course of action which the living body executes or is prepared to execute with regard to some object or some fact of the environment."* (pp. 56–7.) John Dewey voices a similar tendency in his "Human Nature and Conduct" when he says that *bodily habits do our thinking.* (Italics mine.) "The habit of walking is expressed in what a man sees when he keeps still, even in dreams." (p. 37.) Thus the old idols are tumbled to the ground. Over the doorway of the Germanic Museum at Harvard is the inscription: "Es ist der Geist der sich den

Koerper baut." Complete reversal of such an animistic and subjectivistic sentiment is proposed by Dewey when he declares that a man stands erect, not because he wills to, but because he can. His willing is the result, and not the cause, of the muscular contractions which elevate the chest and keep it convex. The old dualism of mind and body, and the older superstition that mind rules matter, have both received their death-blows. In their place a complete mechanistic philosophy is now securely enthroned. It would thus seem likely that a *natural history of virtue* will not long hence be written.

Of all the vexed questions which psychologists have had to answer, perhaps none is more difficult than the question as to the place of language in the mental economy. What is language for? How did it originate? What is its relation to thinking? To overt activity? It is at once apparent that the answers to these questions are highly important to ethics, since the words good and bad, right and wrong, and the like, play such a prominent rôle in our judgments upon our fellow-men. Neither does it seem possible to understand why we employ these pairs of antonyms until we know what the single terms of the pairs signify. And while it will require several of the following chapters to give a satisfactory answer to some of the above questions, it is readily agreed that our judgments of value are employed principally for two purposes:—(1) to

sort out some of the objects of the environment, e. g., by calling these *good* and those *bad,* etc., and (2) to indicate to other persons what kind of behavior is to be expected of us with regard to the objects thus designated. That is our common experience. If a man calls a shop a *good* shop, his future behavior toward it can be predicted. If he calls his neighbor *vicious* he can be expected not to leave his wheelbarrow or his lawn-mower out at night. Moreover, if we know what sort of things a man calls bad, virtuous, or right, his whole social philosophy can be plotted from the data provided by these particular judgments. To state it briefly, speech becomes an instrument for the transmission of *meanings.* Before we proceed further, let us see just what this involves in terms of bodily mechanisms.

A Mechanistic Interpretation of the Meaning of Words

To the superficial observer of a man who declares that something is cheap, or beautiful, or good, the sight of his lips moving and the sound of the words as they are produced might appear to be the whole phenomenon. Nevertheless, if anyone were to look carefully behind the scenes of this performance, one would find a much more elaborate play being enacted than is apparent on the surface. Just as we know now from the findings of the physiologist that

when the eye *sees,* far more structures than the retina are affected, and just as we are now certain that when the ear *hears,* many more organs than the ear-drum and cochlea take part in the response to the stimulus, so we are convinced that when the words we speak have a meaning, a neuro-muscular drama of a very elaborate character is being silently performed within our skin.

Novelists and story-tellers of all ages seem to have intuited this truth in their portrayal of human emotions. They speak of "pent-up anger," of "stifled sorrow," and they describe often in minute detail the course of a passion that in seeking to get adequate expression causes the face to flush, the hand to clench, or the body as a whole to be violently agitated. The Iliad and the Odyssey abound in descriptions of this sort, and every novelist since the days of Homer has felt the need of such portrayals in order to make his characters understood. Indeed, the cultivation of this technique is the essence of dramatic art. But mark, that such emotions are aroused not only when a person is confronted by the physical facts of battle, murder, or sudden death, for example, but also *by the bare mention of the words or phrases* which appropriately describe such catastrophes. The more carefully such a person is observed, the plainer will it become that the agitation which his body is covertly manifesting would, if it were unhindered in its free expression, result in an elaborate pantomine appropriate to the events

described by the story-teller. In other words, the emotions which a thrilling narrative arouses are substitutes for the overt activity which the auditor might be expected to manifest were he actually a participant in the scene described. When, then, we say that a dramatic situation *moves* us, the description is absolutely accurate. Indeed, from the most credible scientific evidence we possess, the emotions which are thus aroused are characterized by all the organic stresses and strains which are present in the most violent overt activity of which we are capable. We inwardly writhe and tussle, we half-start one kind of positive behavior, only to find it checked by the initiation of its opposite,—in a word, we display on a small scale all the conduct appropriate to the situation. And this elaborate arousal to activity is, we undertake to say, precisely what gives every dramatic scene or narrative its meaning.

Dr. George W. Crile has coined the appropriate phrase "action-pattern" to describe the mechanism involved in the cases just cited. Crile's "action-pattern" is, indeed, practically identical with Holt's "specific response," and with Titchener's "motor set," of which phrases the latter two are today familiar to most students of psychology. Briefly, this action-pattern is simply a more or less fixed way in which some part of the body produces a movement. It depends principally upon the physical structure of the part, as well as upon its muscle and nerve supply, and secondly upon the habits of move-

ment which external stimuli have repeatedly produced in it. Thus every healthy leg has acquired the action-patterns of walking and running, and some legs have in addition the patterns of kicking, or of "stepping on the gas" in open level country. What we call the most skilful parts of the body are those which have the greatest number of action-patterns. The hands, lips, eyes, and tongue could on this point be properly called the reservoirs of intelligence. Certainly in the evolution of man they have played the strategical part. Moreover, it is supposedly these action-patterns, these habits of movement, which are aroused whenever we are said to remember or imagine, to cogitate or ponder; and this is, I take it, what Dewey implies when he says that bodily habits do our thinking. I have elsewhere shown [1] how one action-pattern of the human hand performs yeoman service in this respect, and it would not be difficult to demonstrate that every action-pattern is capable of generating a multitude of thoughts. When, then, we say that a novelist or poet has portrayed a moving, tragic scene, we shall now understand that he has re-aroused in us bodily habits which we started to acquire when we first became acquainted with grief.

While we do not claim that all cases of meaning involve such wide-spread and imperative bodily disturbances as those which occur in connection with

[1] "The Intellectual Significance of the Grasping Reflex," Jour. of Phil., Vol. XVIII, No. 23, pp. 617–628.

tragic or erotic situations, it is nevertheless a valid inference that words which stimulate us to no activity whatsoever mean nothing to us. Certain it is, at least, that the more meaningful or significant any word is, the more does it stir up latent tendencies to action throughout our whole organism. Political and religious slogans are telling examples of this. "Great is Diana of the Ephesians!" "Remember the Maine!" and "For God, for Country, and for Yale!" have been for some persons phrases of the maximal philosophic content. Moreover, the same word may arouse different meanings (or action-patterns) in different people, depending not only on how the word is spoken, but also on the mood of the auditor. It is a matter of common observation that the shout of "Fire!" calls forth by no means the same responses from an insured landlord as it evokes from an uninsured tenant, while the mention of *water* will stimulate one sort of reflex action in a thirsty man, and quite another sort in a man who has just been rescued from drowning.

It is plain, then, that if physiological science has achieved the least light upon the problems of psychology, the meaning which any word or phrase possesses is not something that the sound of the word or its written symbol is endowed with, or something that filters through from any Platonic realm of ideas, but the meaning of any word is given to it by the person who speaks or hears it. Moreover, this

endowment of meaning is implicit in the arousal of action tendencies at the time when the word is spoken or heard. In the example recently cited, the word "fire" had a different meaning for the insured landlord from what it had for the uninsured tenant because the habits of precaution which the former had acquired established a different motor attitude toward fire than did the procrastination of the latter. Consequently, the shouting and the conflagration were stimuli in the presence of which the landlord could be calm, while the tenant could not.

The application of this principle of the dependence of meaning upon action-patterns extends, however, to other situations than those in which emotional riots are observable. Indeed, we undertake to say that even such plain, concrete words as *basket, horse,* and *river* have a meaning because they arouse us to motor activities of one sort or another. It may well be, of course, that we start to think of a basket in terms of its color, or shape, or its cost; and of a horse in like terms; while we think of a river only in connection with its height during seasons of drought or flood: but eventually the basket will, by implying *receptacle,* lead in our imagination to the acts of filling and emptying; while the horse will be finally pulling our loads or carrying our weight on his back; and the river will be either waded or swum by us, or become related to our necessities or pastimes (our habits) in some other

manner. And when we thus develop a specific action-pattern toward such an object, we are said to know what it *means*. It has long been a maxim in education that not until we know how to use and control our environment, do we become fully intelligent towards it. The theory and the fact of action-patterns gives unusual support to this particularly profitable maxim. Spinoza laid down the principle that the will and the intellect are one and the same, and this principle too has complete verification from mechanistic psychology. Thought is dependent upon bodily activity, and it does not matter for our present purpose whether that activity be overt or subtly concealed.

The question now arises: Does the meaning of abstract terms, of the terms we use in our judgments of value, consist in the same kind of motor tendencies as those which are aroused by concrete terms? From the following considerations I believe we can say that it does.

To begin with, abstract terms are one and all the result of the process of abstraction. This process consists in our picking out some common feature or quality from a great variety of objects, and giving it a name in order to fix it in our memory. For example, fire, the inside of ripe watermelon, and the outside of ripe cherries may all be called *red*. The concept, or abstract term, "red" can thereafter be used on occasion as a gestural sign for all these

various objects when their color is being signified. Moreover, the process of abstracting these common qualities is itself a motor process. It is, physiologically speaking, the same sort of activity as collecting postage stamps or beetles' wings. Indeed, the simplest perception of any concrete object, any red object, for example, involves motor activity of a highly elaborate character. When we look at such an object, not only is the retina of the eye stimulated, but various muscles and glands are simultaneously activated to an elaborate transformation of energy. Likewise, when we hear, taste, smell, or have any other perception, other characteristic transformations of energy are taking place through the arousal of action-patterns. Now we have just stated that abstract terms are derived from the multifarious perception of concrete objects. In what, then, does the meaning of abstract terms consist? It consists in their function of recalling some of the particular experiences from which they were derived. Such an abstract word as "red" has, then, a meaning for us simply because it arouses in any of its phases that particular action-pattern which all sorts of red things have stimulated in us.

This same principle may now be applied to show how even the meaning which attaches to the words we employ to convey judgments of value may be explained in physiological terms. For the highly abstract character which the words *cheap, beautiful,*

and *good* seem at times to possess is simply due to the fact that at the mention of any such word we are simultaneously stimulated to so great a variety of actions that we are unable to follow any one of them through to its conclusion. When such a condition persists, the meaning is said to be vague.

It is, of course, not to be forgotten that every time we use a word, whether we read it, speak it, or hear it, the meaning it arouses is traceable to the fact that firm bonds have been established between the eye, ear, and throat mechanisms on the one hand, and related parts of the body which are involved on the other. This union of the reading-reflexes with the somatic-reflexes is provided for by a very simple mechanism called the conditioned reflex. By such a device, any two reflexes which have been aroused *together* frequently enough by external stimuli will ever thereafter tend to arouse each other. That is why the word "fire" which we all were taught to use to indicate a certain kind of object, will, even if spoken in a wilderness of snow, make us feel some of the effects which flame once produced upon us. Contrariwise, the blindfolded man will, by no other cue than the touch of his fingers, name such objects as carpet, leather, sandpaper, and nails. And from what we have already said about the source of the meaning of abstract terms being traceable to concrete experiences, we may now say that such words as cheap, beautiful, and good, one and all owe their significance to the

fact that they too exhibit the law of the conditioned reflex both in their origin and in their maturity.

How the "All-or-none" Principle Helps to Disclose an Amazing Secret

It being thus apparent that words possess meaning because they arouse motor tendencies in us, let us now see what justification there is for the assertion previously made that these motor tendencies need not be at all visible as overt actions in order to perform their epistemological function. This justification is found in the all-or-none principle of nervous and muscular activity,—a principle having the most far-reaching consequences for both psychology and ethics. We are all familiar with the fact that less work is involved in lifting the arm leisurely to a horizontal position than in moving it through the same radius with a heavy weight held in the hand. However, we are not all familiar with the fact that in the case of the leisurely movement only a few of the myriad nerve and muscle fibers of the arm are being innervated, the rest being completely passive, while in the case of lifting the heavy weight, the proportion of fully active and inertly passive fibers is just the opposite. But this is exactly the case. According to the all-or-none principle discovered by Lucas and Adrian,[1] whenever a single nerve fiber

[1] See "Journal of Physiology" (1909), 38, 113–133; ibid. (1914), 47, 460–474; also Bayliss, W. M., "Principles of General Physiol-

functions at all, it acts in its maximum capacity. Never is such a fiber partially activated; in its all-or-none functioning it is as uncompromising as gravity. Consequently, even though the arm may *feel* uniformly flabby when it is indolently moved about, some few of its nerve and muscle fibers are working to their limit.

This being the case, it is readily apparent that the various qualities of muscular movement,—languid, intentional, unintentional, or deliberate,—have one and all a strictly quantitative basis. If a man's smile spreads out into a grin, this change in the quality of his countenance is caused by the simple addition of fully functioning neuro-muscular units under the skin of his face. If the grin dwindles to the smile, and that again vanishes into a look only faintly reminiscent of pleasure, the opposite process of subtraction is then taking place. Consider now the further implications of this law of Lucas and Adrian. For the logical inference is that when we merely *think* of lifting our arm, but do not lift it visibly, an essential part of the arm-lifting mechanism has been nevertheless specifically stimulated to activity; it is only because not enough muscle fibers have been innervated to overcome the inertia of the limb that the arm does not rise. That is, indeed, our common experience. When we lie abed on a cold winter morning and speculate on the question

ogy," 383–4; Starling, E. H., "Principles of Human Physiology," 205–6.

of getting up, our imagination of the heroic deed is perfectly of a piece with the real business of shivering on the drafty floor. Indeed, according to the all-or-none principle, since even the slightest neuromuscular activity is *positive,* the terms "overt" or "covert" as applied to action refer merely to what an observer can or cannot readily perceive. This principle can be justly applied to the problem of the meaning of words. The implication is sound that even though the action-patterns which are aroused by words are unfelt by us or invisible to an onlooker, these motor tendencies are just as truly positive physiological events, so far as they go, as are the most violent efforts we openly manifest. For the pattern of action is the same; the only difference is in the number of nerve and muscle fibers involved.

It was a motto of Jesus that "As a man thinketh in his heart, so is he." Although the particular phrase, "in his heart," is now regarded as too wild a hyperbole to be justified by the facts, yet the all-or-none principle furnishes an unsuspected substantiation of the essential truth of this motto with respect to certain individuals. We have long known that thinking did somehow lead to action,—that both the rogue and the philanthropist, the slanderer and the coquette often schemed and planned secretly for years without giving any outward hint of what their future behavior was to be. History is full of the trouble caused for those who had "no art to

read the mind's construction in the face" of him who could "smile and smile and be a villain." And now the secret is out why for so many centuries it was believed that thought produced action and mind ruled matter. Thought *is* action, but action of so elusive a character as to be totally beyond the unaided eye to detect; and thought "leads" to action for the same reason that a spark can produce a conflagration and a hole in a dyke produce a flood. In all three cases the greater effect is due to the magnification of the exciting cause. The ancients held that mind ruled the body for the reason that, being ignorant of the fact of covert muscular responses, they assumed an incorporeal cause for a series of events whose end-term alone they were able to discern as embodied in the movements of matter.

It is thus finally apparent how by means of the law of the conditioned reflex and the all-or-none principle, both concrete and abstract terms serve not only as gestural signs, but also serve to imply and predict human activities. We have shown that every word which has a meaning *ipso facto* implies action. It matters not whether that action be sudden or violent, or merely one that is carried out on "low gear," so to speak, by the neuro-muscular mechanisms of the body. Neither does it matter whether that action be precise or groping, specific or diffuse; if the word have a meaning it will be accompanied by an action-tendency, and that tendency will be added to the kinetic potentialities,—the character,—of the indi-

vidual. For if it is the case that by the law of the conditioned reflex, words *get* meaning, it is equally to be asserted that by virtue of the all-or-none principle, they *keep* it. Moreover, Holt to the contrary notwithstanding, it is such demonstrable physiological principles as these, and not the mysterious Freudian categories, which are the keys whereby the secrets of mind will be unlocked.

Having thus dealt with the problem of how the neuro-muscular mechanisms of the body generate and maintain the meanings of words, let us now return to the original question of this chapter, namely, What is the ultimate reason why we employ such pairs of antonyms as "good" and "bad" in our judgments of praise or blame, our expressions of desire or aversion, and in our estimations of merit or defect? Our answer is that the felt opposition and contradiction of antonyms is due to the conflict of motor tendencies, and in support of this theory we cite a well-recognized physiological principle,—the law of reciprocal innervation.

The Physiological Explanation of the Opposition of Antonyms

Every freely moving part of the body, such as the leg, the arm, and the head, is equipped principally with two sets of muscles, called, from their functions, the *flexors* and the *extensors*. The flexors are those muscles which for example, upon contract-

ing, draw the legs and the arms toward the body and fold them close to it, and which lower the head upon the chest; while the extensors stretch out the arms and legs, open wide the hands, and raise the head to an erect posture. Other parts of the body are similarly equipped for producing motions of an opposite character in the skeletal system.[1] The eyeballs are lowered by the use of a different muscle than that by which they are elevated; the muscle which depresses the wings of the nose is a direct antagonist of the other muscles which control the movements of this organ, and so on throughout the whole of our movable bodily structures. Moreover, when one such pair of muscles is contracted, the opposed member is normally relaxed, and vice versa; or, as the physiologist would say, the two muscles are reciprocally innervated.[2]

However, it must not be understood that this law refers only to the visible contractions of the muscles which produce the overt behavior of a man, for it equally explains the case where a very small number of nerve and muscle fibers are activated. That is to say, the law of all-or-none *and* the law of reciprocal innervation can both operate in the face or the hand at the same time. Indeed, we must not

[1] Mark carefully, that according to this, so-called "voluntary" movement (or will) is simply movement produced by one member of any pair of antagonistic muscles. This physical equipment is of paramount importance to the function of willing. Note also, that "free will" always did mean the choice of two alternatives!

[2] See Bayliss, op. cit., pp. 494–8; Starling, op. cit., pp. 335–6.

neglect to consider that *all* of the myriad fibers of our largest muscles are never simultaneously contracted; rather is it the rule that these fibers contract in relays,[1] thereby automatically saving us from the fatigue and exhaustion which would otherwise ensue. Moreover, the more intelligent and skilful we become, or, as we sometimes say, the more our head saves our heels, the fewer muscle fibers are required to generate and maintain any specific action-tendency. Consequently, then, the law of reciprocal innervation can be exhibited in the antagonism of extremely small muscular units, such as we have postulated to be involved in certain cases of meaning provided they be anatomically situated in the correct position for producing antagonistic strains. Now the experimental demonstration of the law of dynamogenesis at the hands of Richet, Charcot, etc., revealed that just such slight movements of an opposed character are produced when we merely "think" of *up* and *down, right* and *left, in* and *out,* and the like. In every case of this sort, some part of the movable, skeletal system performs overtly or covertly the appropriate movement, thereby giving meaning to the word. We may therefore, unless we read all signs incorrectly, safely affirm that

[1] This is especially observable in all free-hand or free-arm movements, as, for example, when one tries to throw missiles in quick succession at a target. In spite of one's own verbal suggestions, both speed and accuracy vary with every shot. This peculiar property of muscle should henceforth factor into our definitions of *chance* and *luck.*

whatever be the action-pattern which any abstract term arouses in us, the antonym of that term, if indeed it be its logical and physiological antonym, arouses action-patterns of an opposite character.

Our physiological explanation of the meaning of words and the contradiction of antonyms is now complete. For if, as we have previously shown, even abstract terms acquire and keep their meaning by virtue of the reflex tendencies which they arouse, it is likewise apparent that the basis of logical opposition and contradiction is to be found by an examination of the baldest facts of the physics and physiology of the human body. In brief, then, *antonyms are those words whose utterance stimulates us so to react as to illustrate the law of reciprocal innervation.* And this, moreover, is the only reason why *cheap* is the opposite of *expensive, true* the contradictory of *false,* and *good* the antithesis of *bad.*

Two words more, however, remain to be said. The first of these is, that the number of pairs of antonyms we have in our vocabulary signifies how many different pairs of antagonistic motor tendencies or action-patterns we could, were we fully aroused, overtly manifest. Since thought is either a rehearsal for, or a rumination upon, action, it is essentially a process which employs the same structures of the body as those which are activated in our buying and selling, our giving and taking, our toil and our play. The second word is, that if it

be due strictly to our muscular architecture that antonyms occur in human speech, we can now safely affirm that any philosophy or religion which construes the universe as divided between the warring forces of light and darkness, or as everywhere illustrating the bi-polar principles of love and hate, is likewise based upon the law of the reciprocal innervation of antagonistic muscles. Such philosophies are, indeed, profound, since they attempt to inscribe on the firmament the drama of man's limitations.

With this by way of introduction, we are now prepared to examine the various terms by which we are wont to convey our ideas of ethical value, in order to see just what the words "good," "bad," "right," "wrong," and the like really *mean*. And while the difficulties of such a task are admittedly great, yet the presumption is entirely in favor of the methods of mechanistic psychology to give a strictly scientific interpretation to the subject matter of ethics.

CHAPTER III

THE BIOLOGICAL SIGNIFICATION OF THE WORD "GOOD"

". . . The majority attend to words rather than to things; and thus very frequently assent to terms without attaching to them any meaning, either because they think they once understood them, or imagine they received them from others by whom they were correctly understood. . . . Wherefore, if we would philosophize in earnest, and give ourselves to the search after all truths we are capable of knowing, we must, in the first place, lay aside our prejudices; in other words, we must take care scrupulously to withhold our assent from the opinions we have formerly admitted, until upon new examination we discover that they are true." DESCARTES, "The Principles of Philosophy," LXXIV, LXXV.

What do we mean by the word "good"? That is to say, how shall we describe the action-pattern which the stimulus of this word arouses in us? What does it mean when *we* use it, and what does it mean to us when *others* employ it in their speech? Before we can answer these questions, it is first essential to scan the list of things to which this word is applied, for only by so doing can we identify the

term *good* with some specific function of the human organism.[1]

Although such a task is a difficult one, the difficulty does not appear to be insurmountable. In

[1] The following list of uses of the word "good" has been taken from Murray's New Oxford Dictionary, The Century Dictionary and Encyclopedia, Webster's, and the Standard Dictionary. From the same sources also were derived the lists given in the following five chapters. It should, however, be well noted that the lexicographer rarely attempts such an analytical definition of words as we are in search of here. He confines himself chiefly to the etymology of a word and its synonyms, and to citing quotations which illustrate the accepted usage of words. As a result, the man who looks into a dictionary will increase his range of associations long before he will be stimulated to perform that most fruitful of all mental activities,—critical analysis.

THE USES OF THE WORD "GOOD"

1. Good food; fit to eat, untainted.
2. Good food; nutritious, palatable.
3. Good medicine; useful as a remedy.
4. Good soil; fertile, arable.
5. Good ice; easy to skate on.
6. Good ice; fit to dissolve in drinking water.
7. Good ship; capable, or under sail, or expressing pride in the owner, or as an expression of well-wishing.
8. Good cat; able mouser, house-broken, etc.
9. Good child; quiet, obedient, not troublesome.
10. Good person *for:* capable, thorough, skilful, competent, clever at, in concord with.
11. "To can no good," (colloq.); to be untrained.
12. Good for a period of time; well able to accomplish.
13. In good earnest; vigorously and effectively.
14. Good king; one who fulfils his function, or is beloved by his subjects.
15. To good; to improve land by manuring it.
16. Good space or time for; available for the purpose.
17. Good opinion; favorable or approving, laudatory.
18. Good cry; beneficent, profitable, salutary, wholesome.
19. Good spirits; not depressed or dejected, indicative of resilience or ambition.

spite of the fact that nearly eighty significations are possessed by this word, they will, nevertheless, if pondered long enough, reveal some common core of meaning. And if we now bear in mind that every such synonym implies a motor mechanism that is developing a specific attitude toward the environment, we shall hope to find a true solution to the problem of the meaning of the concept "good".

20. Good offices; friendly use of power.
21. Good man; kind, benevolent, gentle, gracious, friendly, favorably disposed, virtuous, skilful, commendable, pious, devout, or religiously approved.
22. Good season; holy days.
23. The good book; "tending to spiritual edification."
24. The good God; "connoting perfection or benevolence."
25. Highest good; conventional phrase of philosophers.
26. "Antonio is a good man"; reliable, safe, able to fulfil his engagements, financially sound.
27. "A man of good"; of property, standing, rank.
28. Goods; property, merchandise, wares, live-stock, cattle, etc.
29. "A great good"; a large sum of money.
30. To yield a good product or result; to turn to a person's advantage.
31. To the good; balance on the credit side, excess of assets over liabilities.
32. "Good fors"; colloquial in South Africa for promissory notes, drafts, "I.O.U.'s," etc.
33. Good wind; favorable, not too weak or too strong.
34. Good health; conducive to peace of mind and longevity.
35. Good order; stable, satisfying.
36. Good complexion; gratifying, favorable, advantageous, etc.
37. Good face; fair or smooth, or indicating intellectual ability or trustworthiness of character.
38. Good play; agreeable, amusing, skilful.
39. Good fame; honorable, not sullied.
40. To have a good night of it; to sleep undisturbedly and to be refreshed by so doing.
41. To have a good time of it; period of enjoyment.
42. Good will; benevolence.

The term *good* is used as an adjective, noun, and adverb, and occasionally (Ex. 15) as a verb; in addition, it has sometimes an idiomatic significance, in which case its exact status as a part of speech is doubtful. These differences, however, need not concern us here. *Good* has originally an adjectival signification, and by derivation implies *fitting* or *suitable*. This is highly important, for since *fitting* and *suitable* exclusively describe things which help us realize our purposes, we may consider the re-

43. "Good morning"; elliptical for well wishing.
44. "Good bye"; elliptical for well wishing at departure.
45. To take in good part; to be somewhat pleased, or at least not displeased.
46. "Good to overcome"; easy to overcome.
47. To appear or seem good; implying various degrees of commendation, depending, however, upon the accent of the speaker.
48. A good deal; an amount greater than expected.
49. A good deal; adequate, abundant, ample, sufficient.
50. As good as; practically or to all intents and purposes the same.
51. To be as good as one's word; to act up to the full sense of the letter or the meaning.
52. To make good; to succeed, fulfil, or perform, carry out or succeed in performing.
53. To make good; to fill up even or level.
54. To make good; to repair or restore, to compensate for, to supply a deficiency, to pay a debt.
55. To make good; to secure prisoners for the night.
56. To make good; to prove to be true or valid, to demonstrate or substantiate a statement.
57. Good for a certain amount; spoken of a person expected to pay or contribute.
58. Good debts; those which are expected to be paid in full.
59. To make one's part good; to make a successful resistance.
60. To become good for; to fulfil expectation.
61. To come to good; spoken of a dream that comes true.
62. Good birth; average or above the average, not humble or mean.

lationship between *good* and human behavior to be inseparable. The type of action-pattern implied by this word may also be faintly foreseen.

We have now the canvas stretched on which our picture of *good* may be delineated. Let us proceed to sketch in the first faint lines of the picture. In the New Oxford Dictionary it is stated that *good* is the "most general adjective of *commendation,* implying the existence in a high, or at least satisfactory degree of *characteristic* qualities, which are

63. Good coin; genuine, not counterfeit.
64. Good purpose or conduct; commendable, acceptable, up to standard, not causing trouble.
65. Good jest; smart, witty, typical, or even exceptional.
66. Good right, claim, reason, plea, proposition; valid, sound.
67. Good legal decision, or contract; valid, effectual, not vitiated by any flaw.
68. To have a good mind to; to be ready to act, to have a matured intention.
69. "Our good wishes go with you"; expectation of happiness or prosperity.
70. For good and all; valid conclusion, finally.
71. "Good my lord"; courteous address, deferential attitude, expectation of favor or esteem.
72. Good life insurance risk; likely to live a long time.
73. "Good men and true"; spoken of a jury that is expected to render a fair verdict.
74. Good old; possibly a term of praise, or merely meaning *very* old.
75. "Good words!"; equivalent to "do not speak so fiercely," or "I expected kind words from you."
76. "The good people"; palliatory with reference to the fairies or witches.
77. Good gracious! good Peter! good God!; exclamatory, possibly signifying the presence of something that is unexpected, which may be either welcome or otherwise.
78. Good folk; used in a jocular or depreciatory sense.
79. Goody good; mildly depreciatory of trustful simplicity.

either admirable in themselves [sic!] or *useful for some purpose.*" This definition succeeds far better in combining the theory of the Epicureans (good is what you like), of the Platonists (the good is the typical), and of the Benthamites (the good is the useful), than it succeeds in throwing a clear light upon the question we are here attempting to answer, namely, what sort of responses does the human organism make toward those objects and persons which it calls "good"? From Palmer's definition of *good* as "good *for*" ("The Nature of Goodness," p. 13), we are able to derive even less assistance, especially since it avoids the main issue in containing the very word to be defined.

Let us now attack this problem by a new method. A survey of all the things which this word *good* indicates reveals not only that it *denotes* (or simply points out) a host of distinguishable objects and properties, but that it also *connotes* (or implies) an exceedingly numerous array of human activities. And while the sum total of all these denotations and connotations appears at first to be an unwieldy mass, it can, I think, be suitably dealt with under the following five classes:—

A. That which is useful, fit, serviceable, and the like, for any purpose whatsoever. With such primitive use of the term, the purpose involved is neither praised nor blamed. The burglar's jimmy is as "good" for his purpose as is an overcoat to keep out the cold. Some ethical writers refer to this as *im-*

mediate, as opposed to *remote* or *mediate* good, or as non-moral as opposed to moral good. It is "good *for,*" without any limitations as to what the *"for"* implies. William James might have called it "decerebrate good."

B. That which is useful, fit, or serviceable in the sense of being *continuously* or *continually* so. An extended time being here introduced, *good* now becomes almost synonymous with dependable. Our concept here may refer to anything that sustains life, or brings peace and contentment in society, and hence at one moment it emphasizes intelligence and skill, while at another it points directly to benevolent, spiritual, and esthetic agencies. Moreover, it not only denotes property (Ex. 28, "goods"), but also frequently connotes an emotional enthusiasm in the possessor of it.

C. That which fulfils expectation. This signification is sometimes equivalent to "normal" or "typical," which terms are also frequently included in the connotation of "useful" and "dependable." But here a distinctly new factor enters into the use of this concept, namely, the tone of voice by which the word "good" is uttered, for all colors and shades of emotion and sentiment may be registered by this means. Hence the concept "good" may be used to imply that which just passably fulfils expectation, or—

D. It may be used to indicate that expectation has been greatly and even suddenly exceeded, in which

case it sometimes denotes the presence of something which is rated far above the normal, the immediately useful, or the mildly beneficent (thereby identifying itself with some of the significations exhibited in Class B), or—

E. It may be merely expletive. Here the use of the term "good" rapidly becomes exotic. It signifies only surprise, shock, or spasm. "Good" as an expletive also becomes closely allied with "good" as an adverb, in which case its significance as a term by which to express a judgment of value rapidly evaporates.

The Results of an Experiment to Determine Which of These Five Classes Are Implied by the Seventy-Nine Significations of the Word "Good"

The choice of these five classes was the result of a test carried out over a period of several years. Each one of the seventy-nine significations was printed on a separate slip of paper, and then, first choosing one of them at random, and employing it as a tentative standard, the points of similarity and difference between it and the remaining significations were determined and recorded. From this procedure there gradually arose, by differentiation and condensation, the five classes we have just indicated, which, as may be observed, are defined so as to include as many and to exclude as few of the uses of "good" as possible. Had our classes been

defined with too great emphasis upon the meaning of any single term of our array, the whole idea of a classification would have had to be abandoned.

Having thus determined upon these five classes as representative and significant, one hundred college students were asked to ponder these classes in connection with the subjoined array of the common uses of the word "good," to choose one of the classes as the one most appropriate in each case, and then to choose as many other of these classes as seemed to be involved, and to rank them in order of their importance. For example, they were shown the first two terms of the array,—(1) "Good food; fit to eat, untainted," and (2) "Good food; nutritious, palatable," and were asked whether they belonged in Class A, B, C, D, or E. It was at once seen that membership in more than one class was implied in both cases, but it was also admitted that nutritious and palatable food (No. 2) was a more dependable "good" than was the food specified by example No. 1. First choices were consequently indicated on this basis. After that, second, third, and succeeding choices were made for Nos. 1 and 2; following which, the remainder of the array was treated in the same manner.

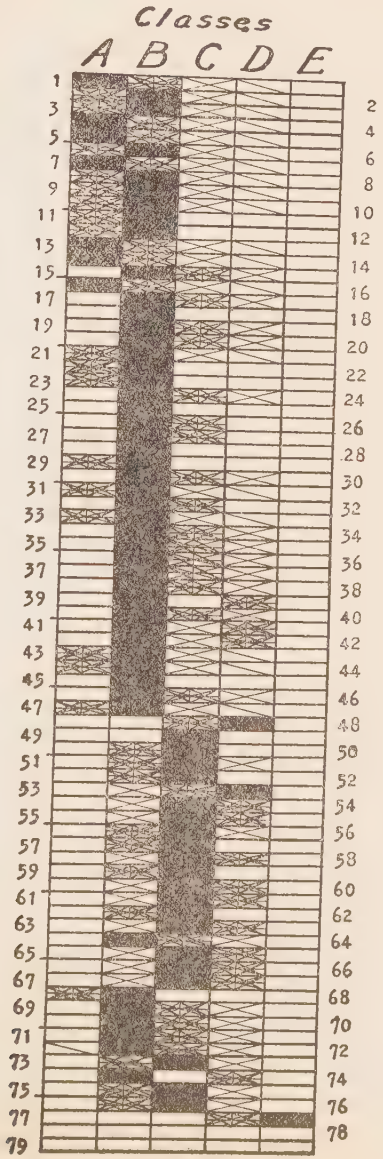
The average of the results derived from this experiment indicates that Class B (dependable "good") has a majority of votes, it being given first place 49 times, and a subsidiary place 75 times. Class C was given first place 20 times, and a secon-

CHART
Showing the distribution of the 79 significations of the word "Good."

(Explanation in text.)

Key

= First Choice.
= Second Choice.
= Third Choice.
= Fourth Choice.
= Not Chosen.



dary place 65 times. Class A was the first to be implicated in 5 uses of the word "good," and was mentioned as a later choice 26 other times. Class D was voted to be the one most obviously implied only 2 times, but was mentioned in an associative relationship 59 times, while Class E, which received only one vote, got that for first place. The importance of Class B is thus clearly apparent. However, an almost equally significant fact seems to be that there were only five cases in which one class alone was implicated, whereas two classes were used in 18 cases, three classes were used in 34 cases, and four classes were simultaneously implicated by 20 terms of this array. The appended chart renders this distribution and overlapping more obvious. From all this, moreover, we seem to be warranted in inferring that, with all the unlikeness there is between these various synonyms for "good" when taken one at a time, when taken all together (*sub specie aeternitatis,* as Spinoza would say) there is more of a common core of meaning in them than one might naïvely expect. Consequently, we may safely presume that if we can satisfactorily define any one of the preceding five classes of "good" in physiological terms, we shall at the same time have hinted the definitions of all the remaining classes.

In this connection one important thing must be borne in mind. Which is, that in attempting to reach our final definition of "good" we need only to abstract the common characteristic,—in mathemat-

ical parlance,—the greatest common divisor of all the particular uses for which this word is employed. Consequently the definition we are searching for cannot be expected to have any bias toward private or provincial conceptions of the term "good." It must be catholic and unpartisan.

The Action-Patterns Implied by the Use of the Word "Good"

We are now prepared to answer the question propounded at the opening of this chapter: "What do we mean by the word 'good'? That is to say, how shall we describe the action-pattern which the stimulus of this word arouses in us?" For if we can find out "what the organism is doing" when its vocal organs are uttering this concept, we shall be able to discover what the word "good" means.

It does not appear especially difficult to find what we are now seeking. We have just given the total array of uses to which this word is put, and we have also reduced that array to some measure of coherence by means of our five classes. Is it not, indeed, a matter of the commonest observation just what conduct human beings manifest when they use the term "good" and signify thereby what is included in Class A? It will be recalled that this class includes "that which is useful, fit, serviceable, and the like, for any purpose whatsoever." Keeping our eye upon the specific behavior patterns implied by this class of

"good," we may now venture the following mechanistic interpretation: *When a man is ready to perform any action, he calls anything* GOOD *which assists or furthers that particular action-tendency.* Or, the same thing may be conveyed in the following words: *Any stimulus that evokes a response we are ready to make we are wont to call good.*

Any picture of the human race that one may draw furnishes evidence of the cogency of this definition. The child calls candy "good," not because he knows that sugar is muscle food, but simply because he craves it, and sucks it in his mouth with avidity. This mode of speech he got long ago from his parents. His wanting the candy makes it "good" to him when he gets it, because the candy is a stimulus that evokes a response he was ready to make. The boy of ten wants a top that will spin like those which the other boys have, and he calls his a "good" top, when it satisfies the action-pattern which he has been developing. The rough youth of seventeen gives his bullying chum a "good" punch in the eye, by which he again means that the action-tendency he was covertly developing toward him has been provided a chance to expand into a full excitation. The college man of twenty-two calls a dance tune a "good" one, when, by its rhythmic effects it induces him to caper and relax, and satisfy his semi-sexual tendencies in public. And the old man of sixty-five often speaks of his wife as a "good" woman, because she has always had his dinner ready for him piping

hot when, upon coming home, his whole alimentary system was keyed up to perform elaborate acts of chewing and swallowing. These and countless other cases, taken from every hour of the day and night, fully support the mechanistic interpretation which we have just given. But mark, that no question is in place here as to whether all such persons *ought* to use the word "good" in such connections. The fact that they *do* use it is, for the present, the only essential item to be considered in an empirical science of human conduct.

Just as when we enquired into the basic nature of antonyms, we carried our investigation a little below the surface of the organism, so may we here carry on a similar study to advantage. It is obvious that the readiness with which we respond to the objects called "good" is necessarily dependent upon the integrity of certain internal mechanisms, which, though never observed in their uninterrupted working, have nevertheless been deduced from a multitude of scientific investigations. Moreover, it has been discovered that every response we make is chiefly a function of the muscular and nervous systems of the body. How, indeed, would a child reach out for candy unless his arm were an extensible hinge, and how could it be extended unless something, namely, his triceps muscle, pulled on the radial bone, and how also could the muscle contract, unless a motor nerve from the spinal cord were stimulated to perform this specific activity? We do not, of course, specify that

the definition of "good" be restricted to imply only this particular set of facts, but on the other hand we stipulate that this significant mechanism be not lost sight of by him who seeks without prejudice to understand how ethical concepts originate. Even more specific information than this is now available. Any muscle that is ready to contract (or, as the vitalist would say, to do Psyche's bidding in attaining Homo's *good*) is said to be in a condition of tonus or elastic tension. So far, then, as the muscles are concerned, the "good" of Class A implies a normal muscular tonus, which can, under the proper conditions, be developed into a full contraction. Physicians know that in both of the abnormal conditions of tetanus and contractured tonus, the organism cannot obtain some of the things which are essential for its adaptation of the world about it. The possession of a normal muscular tonus is, then, an ethical desideratum of no mean importance.

Every such muscular contraction as we have just described is brought about by means of a nervous impulse, originating at a receptor organ, either external or internal, which impulse proceeds toward a muscle or a group of muscles. However, this impulse (which in a sense may be thought of as a desire on its way to fulfilment), is often subject to a rather eventful history of interruptions before it finally produces muscular action. Between the individual nervous strands along the pathway of its motion the impulse may encounter blockades, unless

electrically charged particles (called *ions*) are present at the various gaps in considerable numbers. Here again, then, we reach a further refinement in our understanding of what one class of "good" means. The "permeability of the synapses" (to use a phrase descriptive of the above situation), thus becomes a large determinant in human action. And if one of the classes of our concept is definable in terms of actions that are facilitated, the light which neurology throws upon ethics is not to be despised.

Our next adventure is the search for the various implications of the term "good" as employed with respect to Class B. This class, as previously stated, involves the general notion of *dependability*. Things of this class are nominally useful, fit, or serviceable, not merely with reference to the desire of the moment, but also and more particularly they are useful for the future also. Nevertheless, this phrase, "useful for the future," must be taken to mean "imagined as continuously or continually useful," for although we commonly regard tomorrow as a sort of package that is coming to us in the mail, it is strictly something not yet existing and consequently unreal. Just as William James said, "The feeling of past time is a present feeling," so is the feeling of dependability here to be interpreted not as a property of objects, but as a condition of the organism. And, while no incontrovertible evidence of the nature of such a condition has yet been brought to light, it is directly

in line with the facts as we know them to assert that the "good" included in Class B implies both a maintenance of muscular tone and a steady permeability of the synaptic membranes involved in the action-patterns aroused by the things we keep calling "good." To which we might also safely add, that the receptor organ requisite for initiating such an energy transformation has also become so attuned to receiving the stimulus as to show what the psychologists call a lowered threshold. Suppose we now condense this whole account, and state it more pointedly by saying that Class B refers to those objects that produce the responses for which the organism has mobilized its maximum available energies. Some of these dependable "goods" may thus imply habitual responses, while others may simply imply a craving long denied its overt satisfaction. And I doubt not that between these two extremes every man can find his own "highest *good.*"

In passing, it might be pertinent to remark that the "good" implied by Class B is always *life-enchancing,* were it not for the fact that this obtrudes a standard not warranted by all users of this term. For the snap judgment (or even the pondered conclusion) of an exceedingly great number of people makes money the chief dependable "good," that of others puts friends and companions in this category, while with fewer still knowledge is so regarded. Some of these things do not always turn out to be life-enhancing,—time, place, circumstance,

and the ductless glands alter the assumed value of any such hypothesis. Hence "good" has been here defined simply in terms of what the organism is doing, and not in terms of any spurious teleological principle. Empirical science has no books to balance. He who watches a little closely will see that as far as conduct reveals it (which is, indeed, very far), all sorts of things that are not particularly life-enhancing are chosen hourly as the "highest goods" in the sense of being greedily and furiously pursued. Sexual excitement, drug-taking, gourmandizing, idling, and the latest styles in clothing vie with any and all of these soberer values for first place in the attention of numberless people. And while many a man may choose for himself, yet none can choose for all.

Class B includes skilful and kind persons as objects to which the term "good" is customarily applied. No new difficulties confront our attempt to pronounce the physiological implications of our concept as thus employed, even if we are obliged to alter to some slight extent our previous point of view. The skilful man is called "good" simply because he does or can mobilize his energy to produce something which is regarded as useful, fit, or serviceable. Likewise, the skilful or kind person is one who may be counted on to assist in maintaining, restoring, or increasing any state of things that is regarded as desirable. And we who employ the concept "good" to praise or encourage such a man insinuate that the

same mobilization of energy is going on within us. Indeed, as could be readily shown, all perceptions of persons involve an imitative or empathic response. That is why skill and virtuosity of all sorts are agreeable to behold. They furnish numerous outlets for subconscious action-tendencies.

As regards Class C, the concept "good" points to "that which fulfils expectation," that is, the *normal* or *typical* thing. These words "normal" and "typical" ("implying the existence of characteristic qualities") are related to the word "good" by means of the conditioned reflex. Our experience with all such things as motor-cars, for example, involves not only cognition, but eventually discrimination and comparison as well. Thereafter, when we hear of a *good* motor-car, we think of such a one as we have been trained to regard as capable of a certain kind of performance. The same thing holds with respect to all other objects and persons concerning whom we have become discriminative. "Good," thus employed, seems to imply that energy is being mobilized to perform selective activity, and also that the sense organs have become specially attuned to receive a specific stimulus. The "good" cat is not any old beast of the back alley, but a mouser with a certain number of catches to her credit. The "good" grocer (that is, supposedly *normal*) is one who gives full weight and makes prompt deliveries. Moreover, there is implicit in all such uses of this value predicate some reference to that dependability

which was discussed in connection with Class B. Here, then, we may state that Class C implies *the mobilization of energy for the performance of such action as will maintain our physical or mental equilibrium.* And this, physiologically speaking, is ultimately a matter of the progressive coordination of reflexes and the maintenance of muscular tone.

The objects referred to by class D are those which greatly or even suddenly exceed expectation, whence, as has been hinted before, the signification of our concept frequently approaches that of an expletive. Let us see what physiological mechanisms provide this shade of meaning. It is generally realized that not only do our successes and failures, our disappointments and satisfactions attune our neuromuscular mechanism to respond to the typical or normal thing by calling it "good," but these same successes and failures may also whet our appetite for things which, by exceeding the average, shall make up for those experiences which have been especially disappointing. All normal protoplasm is insatiable for the maximum success. And hunger of any sort, physiologically speaking, may be described as a condition in which the motor mechanism is activated to greater efforts than usual in order to relieve the condition of want. Consequently, the physiological implications of the concept "good" may be made as precise with respect to Class D as with any of the preceding classes. The action-patterns implied by this class are those which are exhibited by anyone

when, after long privation, the tensions he has accumulated are suddenly relieved by the appearance of the desired stimulus. Indeed, such action-patterns may sometimes be described as rapacity, as is illustrated in the case of our crying out "Good!" when some misfortune has befallen a particularly annoying prig.

The physiological implications of the term "good" as regards Class E have already been sufficiently hinted in our delineation of that class. Moreover, the surprise, shock, and spasm which it connotes prevent its having an important rôle to play in our judgments of value.

Let us now sum up and condense these several points. From the foregoing it appears that he who uses the word "good" is at the same time exhibiting a certain specific motor attitude toward the environment which gives this word its meaning. As we have already shown, the action-pattern involves the following physiological conditions:—(1) the presence, maintenance, or even heightening of muscular tone, (2) the permeability of the synaptic membranes, especially of those along the motor pathways, (3) selective activity and selective excitability, and (4) normally, the nice coordination of the motor responses involved in overt action. This positively responsive condition of the organism may now be expressed in simpler words by saying that the word "good" is the sign of an *outgoing reaction*. That is to say, in the first place, the things we call

"good" release the energy that is ready to be discharged; in the second place, we participate more fully in that environment which contains a "good" than in one that does not; and in the third place, the effect of the presence of continuously "good" stimuli is to render us more and more responsive, and to provide a wide margin of resiliency for our organic interior.

Our definition of good in physiological terms has now been achieved.

CHAPTER IV

THE ACTION-PATTERNS IMPLIED BY THE WORD "BAD," WITH A NOTE ON THE PHYSIOLOGY OF "EVIL"

"It is noteworthy that there has never been a problem of good, but always a problem of evil. Man takes the good in his life for granted, while he bewails the presence of evil in all its forms. May not reality be of such a character that evil is as natural as good?"

R. W. SELLARS, "The Next Step in Religion," pp. 153–5.

Good and bad, or good and evil, have from the most ancient times been held to be diametrical and thoroughgoing opposites of each other. In the system of Zoroaster this antithesis is metaphorically projected into the remotest heavens, where Mazda, the God of Light, whose deeds were goodness itself, endlessly strove to annihilate Angra, the tireless perpetrator of deceit. The Christian mythologists, in a characteristic imitation of pagan creeds, loved to imagine a final Day of Judgment, when the mild, spotless followers of the Lamb were to be rewarded by an eternal separation from the sooty henchmen of Satan. Similar conceptions, though none of them nearly so poetic, have tinged the thought of every

subsequent era. Most of us are familiar with Milton's fabulous version of the theology of the Middle Ages, in which God the Father is depicted as struggling against the powers of darkness, not, however, by sending irresistible cohorts to besiege and conquer Hell, but rather by counteracting their insidious propaganda in the playground of Adam's Eden. Indeed, one has but to learn to read the simplest literature in any language to realize how much of what is called thinking consists simply in devising contrasts and antitheses. It is the orator's chief *tour de force,* the historian's commonplace, the dramatist's all-important method of producing a plot, and, in fact, without it, no literature would seem to give an adequate picture of the realities of human life. Small wonder then, that in the philosophy of Empedocles, the world-view of Zoroaster, and the theology of Christendom, this stereotyped way of thinking, originating in and generated by the physics and physiology of man's musculature, should be manifest; or that the common man should so readily and persistently hold to the diametrical opposition between good and bad, and right and wrong. The law of reciprocal innervation, being implicit in the body's architecture, is necessarily a basic formula for man's thought.

Even though this be admitted, it guides us only a little ways through the tangle of ethical problems. In the first place, no such dramatic portrayal as, for example, that of Zoroaster,—whatever theatrical

agonies it might provoke,—has either reduced the sum of the world's distresses, or furnished the least insight into the nature of the supposed opposites of goodness. For that matter, indeed, very little knowledge of this character has arisen out of ethical debate or speculation. The assumptions have been many, the facts few; and usually, whenever this discrepancy has been realized, overdrafts have been written on the phantom bank of theory with the vain hope that by this means ethical solvency could be attained. In the second place, it has scarcely occurred to any one to ask whether there was not some other way of looking at the ethical problem than in this duplex manner, for if an irreconcilable opposition in the field of ethics is assumed as a fundamental principle, nothing but an eternal deadlock can result in the conclusion. Now the empirical fact is that man's muscles (the functions of which determine his thoughts), can do other things than oppose and counteract each other, for every day of our lives we see these other motor activities manifested. However, our traditional ethical theory would have it that the dilemma is inescapable,—that things are either good or bad, or actions either right or wrong, and people either virtuous or vicious, and that there is no middle ground, or possibility of reconciliation. Mark, however, that only in serious pathological cases do we observe a complete rigidity of the body due to chronic muscular antagonisms. Is it not therefore a valid inference that the mental rigidity

of most adherents to the bi-polar theory in ethics is likewise a pathological sign, and, if so, are we not driven to the conclusion that man's traditional ethical notions are symptoms of physiological malfunctioning?

Important as all this is, however, it cannot turn us aside from our interest in finding out just to what an extent the word "bad" is a real antonym to the word "good," especially since knowledge of this sort is first necessary before we can employ the method of science in the service of the problems of human conduct. Let us, then, resume our original search.

The term "bad" is a gestural sign which we employ in two different senses,—to point out a deficiency or lack, (that is, to indicate merely the *absence of* good), and in a positive sense, to hint the presence of something definitely *antagonistic to* good. By an analogy, if money is a good, we should call it "bad" in the privative sense of the term for one to be without it; while it is "bad" in the positive sense for one to be deeply in debt. But even while we ponder these two behavior situations, they tend, at least partly, to coalesce, very much indeed as Classes A and B of "good" merged at times imperceptibly into one another. For if the man who is without money, but not in debt, passionately desires to purchase and spend, he will immediately place himself in the class of debtors, and experience therewith the positive form of "badness," at least so far as his feelings of inhibition are concerned. How-

ever, just to what an extent these two categories of "bad" may be identified cannot be shown until we have first reviewed the separate uses to which this term is put,[1] and have also deduced the action-patterns which it implies.

It can be divined at once from a careful perusal of this brief array, herewith subjoined, that the concept "bad" is, on the whole, a far less variegated

[1] THE USES OF THE WORD "BAD"

I. *The Privative Significations of the Word "Bad."*

1. Bad air; vitiated, which cannot sustain healthy respiration.
2. Bad coin; debased, counterfeit.
3. Bad food; deficient in nourishment.
4. Bad food; repugnant on account of its smell or taste, whether deficient in nourishment or not.
5. Bad shot or guess; incorrect, faulty, below standard or par.
6. Bad debts; those which cannot or are not expected to be paid.
7. To go bad; to decay.
8. Bad workmanship; defective, below par, sometimes called poor or worthless.
9. In a bad way; in a wretched or miserable state, unfortunate, unfavorable.
10. With a bad grace; unwillingly.

II. *The Positive Significations of the Word "Bad."*

1. Bad air; noxious, poisonous.
2. Bad food or water; injurious to health, hurtful, dangerous, pernicious.
3. Bad company; depraved, wicked, vicious.
4. Bad fit (as of a shoe); causing inconvenience, displeasure, or pain.
5. Bad smell; unpleasant, offensive, disagreeable, troublesome, painful.
6. "Bad blood"; harsh, angry feeling.
7. In bad health; suffering from disease or injury, (in pain).
8. "To the bad"; to ruin, in deficit.
9. "In bad" (slang); spoken of a man who has made trouble for himself and others.

symbol than is the concept "good." Its use is more restricted, its connotation is less rich in variety, and, as can be already predicted, the number of separate classes into which our array may be distributed is fewer than was the case with the term "good." For while we have here hints of three classes which are, roughly speaking, negatives of Classes A, B, and C of "good," we have nothing at all comparable to the negatives of Classes D and E. To wit:—

Class A. That which is useless, unfit, unserviceable, and the like, for any purpose whatever.

Class B. That which brings pain, discomfort, loss, or death. In some respects this class is the negative of Class B of "good," having the general meaning of *undependable*. However, it is not the negative of every shade of meaning implied by that class, as can at once be seen when we consider that there are no "bads" which are the antitheses of goods, that is, property. For, as we have already observed, even some debts are *good* debts.

Class C. That which disappoints expectation.[1]

[1] In passing, it might be pertinent to consider the question as to whether the word "bad" *is* synonymous with 'that which disappoints expectation.' One might ask, for example, "Do not chronic pessimists literally expect catastrophe?" Here, as elsewhere, we must not be deceived by a trick of speech. For he who says, "I expect disaster," is unwittingly making an equivocal statement. The man who makes such a remark cannot be implying that his whole body, with its numerous action-patterns, is completely set to receive the stimulus that will demolish his equilibrium. Rather should we infer from this utterance that he is at least partly prepared to resist it, partly to rejoice at the incident discomfiture to others, with the hope thereby of making his own troubles dwindle by comparison, and perhaps also partly anticipating the relief that will come when

Here also the negation is limited, for while with Class C of "good" the tone of the voice could convey an immense variety of meanings, here no such great array of nuances is found.

In consideration, then, of what has just preceded, we may emphatically deny that "bad" is a true antonym of the word "good." Not only is this to be instantly deduced from the array of uses to which these terms are put, but also from the contents of the five classes of "good" and the three classes of "bad." We shall presently discover whether "evil," as an adjunct of the concept "bad," makes up this discrepancy.

Resuming, then, our main theme, how shall we proceed to define privative and positive "bad" in physiological terms, and by what means shall we discover the action-patterns which are implied by the three classes of "bad" which we have just delimited?

In general, and from the reader's own experience, "bad" means thwarting, inhibition, opposition, the interruption of action, the durable dissatisfactions of life. We need, however, to come at the matter a little more closely. In the preceding chapter we saw that when we are ready to act, the stimulus that elicits the reaction for which we are keyed up is

the suspense of waiting is over. None of these interpretations disallow the formulation of any of the above classes of "bad." To be sure, there are certain abnormal types, like the sadist and the masochist, to whom pain is an erotic stimulus, but even so, their expectations are always directed to that particular element of the situation which, by affording an outgoing reaction, is for them a "good."

called "good." Employing the methods of inductive science, with our eye on the behavior possibilities of the human organism, we find the following stimulus-response situations adequate to reveal the origin of the word "bad."

1. When we are ready to act in some precise manner, but no stimulus, that is, opportunity, is afforded for such action, the term "bad" adequately describes the situation. Here it becomes a gestural sign which may point either to the environment or to the organism. It is for this reason that a man in debt, hungry, and in want is said to be "in a *bad* way"; while in his predicament counterfeit money and tainted food would be unequivocally bad.

2. When we are ready to act, but are prevented from releasing the energy we have mobilized because the stimulus is inadequate, and does not call forth the exact response which we have been preparing to make, the situation may again be described as "bad." "That's too bad," we sometimes say of a suit of clothes which, while adequately keeping out the winter's cold, does not quite fit the shoulders.

3. When we are *unready,* to act in a certain way, but are summarily called upon to mobilize our energy for this purpose, the situation is again often described as "bad." Unexpected, excess taxes always produce an emotional situation specifically related to this value predicate.

4. Any inadequate response, in other words, one that is faulty, erroneous, and the like, may be called

"bad." Sometimes, also, the person making such a response is described by the same term.

From this it appears that the general meaning of "bad" is within the scope of our discovery. Not only is this deducible from our previous identification of this concept with the *useless,* the *independable,* and with *that which disappoints,* but it is also plainly foreshadowed by the four behavior situations we have just described. "Bad" seems to imply that action, interest, purpose, and the like, have been thwarted; that the organism has become a center of inhibitions, and is in discomfort either because the energy which it has mobilized cannot be released into action, or because demands for such release cannot be met. Such a physiological condition is best described as *incoordinate.* And this term covers all three of our classes of "bad." Moreover, by partial contrast with *good,* "bad" implies a *withdrawing reaction,* with either a slump in muscular tone (in which case we have *privative* "bad"), or else a sudden onset of unrelieved tensions—(*positive* "bad"). Accompanying such a condition, we may safely postulate synaptic impermeability and inhibition, together with varying degrees of unpleasant strain sensations. But mark, that we do not say that the "bad" is always equivalent to the painful.

Were physiological science sufficiently advanced, it would be possible for us to complete our definition of badness in terms of the mal-functioning of such

internal systems as the alimentary canal, the cardiac, respiratory, and excretory mechanisms, and the endocrine glands. Our common experience indubitably indicates that all forms of thwarting and inhibition which prompt our exclamations, react violently upon the internal machinery. Indeed, it is not too much to claim that both the centrifugal and centripetal types of behavior which are implied by the terms "good" and "bad" respectively just as often as not have their source in the postures and manœuvres of our organic interior. That is, brief to say, why the healthy man and the dyspeptic, the optimist and the pessimist, will give precisely opposite accounts of the same external world. We remarked before that speech not only points out and distinguishes objects for us, but also implies and predicts human activities. Our analysis of good and bad fortifies this thesis beyond contradiction, and shows that any value predicate that has a specific reference to the environment has specific implications for the organism as well.

The Physiology of "Evil"

In some minds the term "evil" has primarily what is called a *moral* signification, and implies first and foremost anything "contrary to an accepted standard of righteousness," or anything "inconsistent with or violating the moral law"; and consequently, it is equivalent to the terms "sinful" and

"wicked." Let us not meet such minds too intimately. Speaking in this fashion is not only vague, but misleading as well. For when duly examined, almost every so-called "standard of righteousness" becomes a totally unspecific category of behavior, while the term "moral law" is not *law* in any dependable sense of the term at all. Certainly it is not a law of nature,—of human nature,—for it does not adequately describe any typical behavior situations. Neither is it law to a jurist, since there is no organized force that can be brought to bear upon human beings to compel them to obey it in their actions, much less in their thinking. Moreover, the terms "sinful" and "wicked" are so narrow and provincial and so exclusively employed by religionists "to pelt their adversaries with," that their equivalence to "evil" as a term of value in the broadest ethical sense is, to say the least of it, problematical. Whether unfortunately or not, none of the purely *moral* categories are fundamental for an understanding of the actual behavior of human beings. Indeed, as a usual thing, they hint uncritical and disorderly thinking in him who uses them, rather than specify any intelligent and sympathetic appreciation of human interests, or any analytical insight into the environment which now thwarts and now furthers such interests.

And now to our analysis. The term "evil" is much more assertive than is the word "bad," and more forceful than all but a few significations of the

word "good." It originally had the adverbial force of *up* or *over,* two words whose empathic significance is worthy of remark. Today the term "evil" signifies either (a) "that which exceeds due measure," or (b) "that which oversteps proper limits." Here, then, we notice at the outset that "evil," unlike either good or bad, always carries with it the presumption of standards or rules.

To a large extent the place in the language formerly occupied by the term "evil" is now held by the term "bad." With the reasons for this change we are not especially concerned here, although it may be appropriate to point out that the popularity of any term that has been used almost exclusively by religionists for purposes of anathema is doomed. Besides, the word "evil" calls up literary associations which condemn it to modern minds. Such expressions as "The Evil One" (that is, the Devil of the Middle Ages), the "evil eye" (another outworn superstition), the "King's Evil," and a dozen other equally obsolete terms have fallen into such low repute that they have weakened, so to speak, the gestural significance of the remnants of this concept. Nevertheless, it must be admitted that there is far more dramatic vocal quality attaching to the term "evil" than to either of the words "good" or "bad." Few words in the language provide such an opportunity as does this one for the simultaneous display of eye-, lip-, and jaw-gestures, whose combined effects are none the less striking, no matter how em-

pathically unpleasant they have become. We invite you to stand before the mirror, and say the word "evil" with clenched teeth and canines showing, and verify this remark.

While the term "evil" is employed as an adjective, a noun, and an adverb, we do not need to stop here to catalogue its uses under these three headings. All we need to consider is that "evil" is an intensification of "bad" in the positive sense of that term.[1] It is also a forceful negative of Class B of good, in the sense that it implies *that which actively operates to produce incoordination, mal-adjustment, discomfort, and the like.* It will be recalled that Class B of "good" included whatever conduced to life, health, pleasure, and stability. On the contrary, "evil" is a gestural sign that indicates any and all processes of disintegration, disruption, and confusion. It at once implies something which is energetically antagonistic to our purposes.

[1] THE SIGNIFICATIONS OF THE TERM "EVIL"

1. That which causes or increases harm, injury, misfortune, or disease.
2. Such advice as is misleading, mischievous, or disastrous.
3. Any wish whose fulfilment would lead to calamity, trouble, or death.
4. Any abusive, malicious, or slanderous statement, (compare "*evil* tongue").
5. Any period of time characterized by misfortune or suffering.
6. The term "evil" is also used in special senses, such as in the expression "social evil" (that is, prostitution). But such a use of this word, being special and more or less provincial, should not be over-emphasized in our definition. There are, moreover, many other social evils than prostitution, and some producing far more ethical disaster.

The definition of evil in mechanistic terms is now within our reach. We have said before that "evil" is an intensification of the term "bad," which latter term was used to describe an incoordinate condition of the organism brought about because its wishes, interests, and purposes,—in a word, its action-patterns,—had been thwarted. Just what more than this does "evil" imply? *It implies that our wishes have been thwarted to such an extent as to call forth from us the most energetic, antagonistic reactions of which we are capable.* "Good" signifies an outgoing reaction, "bad" signifies a withdrawing reaction, while "evil" means that within the organism some of the available energies are being hastily mobilized to compensate for an outgoing reaction that has been thwarted. Of course, there are many persons who never attempt any compensation of such a constructive character as to prevent the recurrence of the same evil situation, either because they are physically unfit, or are poor in spirit, but in such cases the word "evil" is used without very much meaning.

Our definition of this concept will, I think, serve to provide a new interpretation of the statement made previously, namely, that "evil always carries with it the presumption of standards or rules." What, precisely, does this statement mean? It means that whenever we have lost our organic equilibrium in the presence of a situation described as *evil,* whatever we do to recover it *ipso facto* at that moment de-

fines not only the standard and rule by which our conduct is regulated, but such behavior also reveals to others just what the "problem of evil" really means to us. For example, if we are vexed and become profane, profanity is patently an integral factor in our philosophy of compensation. If we lose our money, and steal another's to make good our loss, theft is a cardinal principle in our doctrine of equalization. We may, to be sure, immediately thereafter lament the outburst by which we attempted to "set things to rights," but we cannot retrieve the action by which we defined and exhibited our practical ethical philosophy. Our recent Emerson had this scientific truth in mind when he said, "What you are speaks so loud, I cannot hear what you say." Examples of another sort are equally illuminating. If Socrates is condemned to death for corrupting the Athenian youth, and calmly drinks the hemlock in order to remain a law-abiding citizen to the end, this deed of probity defines the dominant action-pattern in his philosophy of retaliation. If Jesus is crucified for blasphemy and inciting to insurrection, and manifests an attitude of non-resistance and equanimity, these action-patterns once more exhibit his method of dealing with the problem of evil. In every such case the bodily habits which have long accumulated are automatically released by the appropriate stimulus into overt behavior. In physiological terms, what a man does in response to evil, shows what sort of reciprocal innervations his

body has acquired. And while such a mechanistic interpretation of an ethical standard may seem astonishing, yet such a *modus agendi* is, unless we are greatly deceived, the one which human beings actually employ, and consequently it is the only one which has any place in an empirical science of conduct.

A Further Remark on the Opposites of "Good"

From our definition of "evil" as an intensification of "bad" in the positive sense of that term, it can at once be noted that these two words do not even together supply a thoroughgoing antonym to the word "good." For they do not strictly imply action-patterns which in the minute and fine are opposed to those underlying all the valid uses of the word "good." It is not to the point that "in general" (which can only mean here *vaguely*) these words are antithetical to each other; our analysis has produced knowledge that henceforth discounts all such remarks. And, if anyone says that for the purposes of morality, the traditional antithesis is still valid, the answer is that morality, after all, is only custom, while ethics is primarily a critical insight into that reality which the moralist has always sought to make obscure.

A more important conclusion, however, is still to be drawn from the foregoing analysis. Which is, that "evil" is not, as has usually been concluded, an

opposite of "good." Indeed, if we have described the situation fairly, when we say that 'evil denotes that our wishes have been thwarted to such an extent as to call forth from us the most energetic, antagonistic reactions of which we are capable,' we can only deduce from this that the antagonistic reactions are aroused for the purpose of replacing something that is "bad" by something that is "good." But if this be the case, then the emphatic quality attaching to the word "evil" is really a sign that we have already started an outgoing reaction that shall furnish the desired compensation. This two-fold meaning of the word "evil' is worthy of more than a passing remark, but suffice it to say that in the light of what has gone before, the "problem of evil" now becomes the problem of educating a man how to replace the "bad" with the "good," rather than a problem over which the metaphysician may dawdle or the moralist mope.

CHAPTER V

"RIGHT" AS A GESTURAL SIGN

"From every point of view, the overwhelming and portentous character ascribed to universal conceptions is surprising. Why, from Plato and Aristotle downwards, philosophers should have vied with each other in scorn of the knowledge of the particular, and in adoration of that of the general, is hard to understand, seeing that the more adorable knowledge ought to be that of the more adorable things, and that the *things* of worth are all concretes and singulars. The only value of universal characters is that they help us, by reasoning, to know new truths about individual things. . . . In sum, therefore, the traditional universal-worship can only be called a bit of perverse sentimentalism, a philosophic 'idol of the tribe.'" W. JAMES, "Principles of Psychology," Vol. I, Chap. XII, pp. 479–80.

There had been a murder in the Maritime Provinces, and two men, a jurist and a layman, were discussing it. The murdered man, it appeared, had from time to time missed some of his sheep, and one day, upon hearing a shot fired, ran down into his pasture, and came upon two boys, one of whom was carrying a gun, and the other a bag whose contours plainly revealed that it contained the body of a sheep. The farmer ordered the boys to follow him to town to give an account of their misbehavior;

and this they proceeded to do without any show of resistance or word of objection. But suddenly, and without any warning, the boy who carried the gun shot the farmer in the back of the head, killing him instantly. The murderer was later apprehended, and put into the county jail, awaiting trial.

"And would they hang a boy of seventeen in Canada?" asked the layman.

"Why not?" enquired the jurist, "They can hang anyone here who has reached the age of discretion, and who knows the difference between right and wrong."

"And will you tell me," parried the layman, "just what that age is, and exactly what that difference is?"

The jurist eyed his inquisitor for a moment, and burst into a laugh. "Only a fool would ask such a question!" he retorted, and turned away.

All of which goes to show that a man may be proficient in legal technique, and yet be an ignoramus in ethics. Knowledge of the meaning of the word "right" is both possible and profitable, and it is hardly too much to suppose that such knowledge, when disseminated, might even produce a salutary effect upon legal theory and legal practice.

Anyone who endeavors to marshal the array of all the uses to which the word "right" is put, will be astonished to find out how extensive the list is. In point of the richness of its denotation and con-

notation, this concept exceeds the term "good." And while it resembles that word in being used as a noun, a verb, an adjective, and an adverb, it significantly differs from the term "good" in that it is employed to refer principally to the relations and functions of things, and hardly ever to objects of the physical environment.

No man's span of perception is large enough, or his span of attention long enough, to surround the complete array of the uses of the word "right" unless this array be divided into classes. Such division will presently appear. And I think it can be shown that no matter how little in common some of the terms of this array seem, to a casual observer, to possess, when they are thus grouped into classes, they will be subtly linked together by adequate bonds. Let us then introduce:

Class A

The Word "Right" as a Term that is Descriptive of Certain Mathematical Relationships and Physical Functions.[1]

[1] Class A is divided into the following sub-classes:

I. Straight.

1. That which is not bent, curved, or crooked in any way; for example, a *straight* line.
2. That which is formed by, or with reference to, a line drawn to another line or surface by the shortest course (i. e., a perpendicular), as, for example, *right* line, *right* angle, *right* ascension, etc.

The original signification of our concept was *straight,* a word, be it noted, that is usually defined in the negative. (See Ex. 1, p. 76.) Why we have a negative definition for a word that seems to have a positive meaning, especially to mathematicians and draughtsmen, is not at first quite obvious. However, when this phenomenon is duly examined from the point of view of the mechanics of man's locomotor apparatus, its secret is no longer hidden. All of the movements naturally produced by the ap-

3. Used to describe solid figures having the ends or base at an angle of 90 degrees with the axis, e. g., *right* solid, *right* sphere, *right* cone, *right* helicoid, etc.
4. *Right* circle; in the stereographic projection, a circle represented by a straight line.
5. *Right* line pen; one that is adapted especially for ruling lines.

II. Direct.

6. The shortest course; that which keeps one and the same direction throughout.
7. That which goes straight to its destination. Compare: "Right across the track."

III. Immediately. (Compare "directly.")

8. Suddenly, at once; e. g., "He went *right* home." "*Right* up the mountain." "Let thine eyes look *right* on." "He went *right* off."
9. *Right* away, *right* here, *right* now, *right* down (Cf. downright). "These strata falling, the whole tract sinks down 'to rights' in the abyss."

IV. Idiomatic uses derived from the foregoing.

10. In hunting, the scent or track of the game. "The dogs have got the *right.*"
11. "*Right* the helm," that is, put it in line with the keel.
12. "*Right* aft," that is, in direct line with the axis and stern of the ship.

pendages of the body are curvilinear: the arm being a lever, or radius vector, it always draws arcs in space or on paper; so does the hand as a whole, and so do the fingers. "Right" signifying *straight,* therefore, is defined negatively simply because straight lines are alien to the physics and mechanics of man's original nature.

Where, then, did man get the notion of straightness, and what has this first class of the uses of "right" to do with ethics? Man got the notion of straightness, we surmise, from such things as freely falling bodies, which give not only the idea of perpendicular, but also and at the same time the ideas of *direct* and *immediately*; from the sunbeams which drew for him imaginary lines among the clouds and through the foliage of the forest; from his need of taking the shortest course across the fields in pursuit of wild animals for the supply of his larder; and from his reminiscent ponderings of the comparative merits of less and less curved and crooked arrows used in the chase. Moreover, man walks with the greatest safety and pursues his game with the greatest chances of success when his feet go without hesitation on a level or straight surface. Under these conditions he can attain his ends directly and immediately; as the saying is, "Things will then come out all *right.*" Consequently, even the straight line has ethical implications: the speed with which some actions are performed and the time required to cover the distance between man and his objective are

very often the chief considerations in the attainment of a good or the avoidance of an evil thing.

And this brings us by a very slight transition to

Class B

"Right" as Descriptive of the Method (or Object) by Which the Desired End Can be Obtained.

Here the purpose involved, or the end sought, is neither praised nor blamed. Nor have we indeed as yet reached any basis by which a criterion of purposes and ends can be established. So far as we have gone, "right" implies technique, and nothing more.

The members of this class are as follows:

13. The "right" information.
14. "Right" whale; the one to capture in order to get whalebone.
15. "Rub your sarsnet well, the *right* way of the sarsnet."
16. "Let it be a constant rule to scrub the boards the *right* way of the grain, that is, lengthwise."
17. "The ship ceased rolling and *righted* herself." (Compare this signification with *perpendicular,* previously given.)
18. "Stand it *upright,* or it will fall."
19. "Whose inhabitants were *right* shooters (at an haires breadth and faile not)."
20. "Swears he will shoot no more, but play with sparrows, And be a boy *right* out."
21. "I am *right* of mine old master's humour for that."

Class C

"Right" as Descriptive of any Statement Which Reports the Facts; of any Opinion or Judg-

ment that is Correct; and of any Person Who Judges, Thinks, or Acts in Accordance with the Facts or the Truth about a Matter.[1]

It will be observed that the significations in this class are all symptomatic of a slight change in the meaning of the concept "right." The emphasis here is upon true opinions and judgments in contrast to false ones. Moreover, the range of behavior covered by Class C is somewhat broader than that denoted by the two preceding classes. He who now uses this word "right" becomes judicial, and makes statements he is willing to defend. More than this we

[1] This class includes:

22. "You say not *right,* old man."
23. "A *right* description of our sport, my Lord."
24. "There hath been a terrible to-do, I could not possibly learn the very *right* of it."
25. "You are certainly in the *right.*"
26. "To put the saddle on the *right* horse." (That is, to impute blame where it is deserved.)
27. "The clock that stands still points *right* twice in the four and twenty hours; while others may keep going continually and be continually going wrong."
28. "A fool must now and then be *right* by chance."
29. "And this wise world of ours is mainly *right.*"
30. "Some praise at morning what they blame at night,
But always think the last opinion *right.*"

Idiomatic and archaic uses, signifying *true, real, actual, genuine, correct.*

31. "If they be not *right* Granado silk."
32. "A pound of ointment of *right* spikenard."
33. "A *right* pipe of Trinidad."
34. "My *ryghte* doghter, tresoure of myn herte."
35. "The Poet is indeed the *right* Popular Philosopher, whereof Esops tales giue good proofe."
36. "Be sure you're *right,* then go ahead."
37. *Right! Right*-O! *Right* you are! (Slang.)

cannot say. We assume many a time, no doubt, that the statements we call true are backed by something not ourselves; and while in some cases nature's laws are in a sense "behind" our statements, yet unless this is the case, there is nothing whatever to fall back upon. Thus, while a man may demonstrate that dynamite is, as he says, truly explosive, yet in cases of the equitable adjustment of social frictions, where both parties pour out a tumult of exaggerations, no similar truth of opinion is obtainable. It would therefore be illogical to assume that we have reached any absolute criterion in passing from Class B to Class C of "right." He who uses this concept in this connection has, indeed, ventured more than he who uses it only to imply the preceding two classes, but he is not thereby gifted with superior powers of discretion. All we can say is that he who undertakes to make a judgment with all the available information before him is more likely to be chosen as a referee again. He will at least have the satisfaction of knowing that if he makes mistakes, they will probably be some that he has never made before. And this way much of human progress lies.

Class D

"Right" as the Distinctive Epithet of the Hand Which is Normally the Stronger.[1]

[1] This class includes:

38. That side of the body which is on the east when the face

The use of our concept in this connection is firmly bound to its use in the preceding classes. For it is no accident that in the mechanistic process called evolution human aims and purposes have come to be furthered and achieved principally through the power and skill of the arm and hand. The "right" arm and hand point reasonably *straight,* throw missiles in a fairly *direct* manner, and their powerful shots bring down the quarry *immediately.* (Class

is toward the north, its limbs, their clothing, etc., as, for example, *right* arm, cheek, leg, ear, coat-sleeve, and so on.

39. Motions in the direction implied in the preceding example: "Go to the *right.*" "*Right* about."
40. Anything, usually one member of a pair, shaped or otherwise adapted for a *right*-hand position or use, e. g., gloves, shoes, etc.
41. A *right*-side tool. A *right*-hand thread on a machine screw.
42. *Right* camphor; "The camphor produced from the Lauraceae which gives a *right* polarization to light.
43. *Right* bower; in euchre the knave of trumps, which is the highest card next to the joker. This card has a place in our study of "right" if for no other reason than that it signifies power of achievement in that player who finds it in his hand.
44. The *right* hand of fellowship. This expression denotes a custom of very ancient origin, practised in treaties by the Persians and Parthians, not only as an inviolable pledge of fidelity ("In union there is strength."), but also as a proof that no club or other weapon was concealed in the hand.
45. In the politics of continental Europe,—that party which occupies the position to the *right* of the president in the legislative assembly.
46. By metonomy (conditioned reflex) the conservative political party.
47. By selective association, the party or party principles which one approves.

A.) These parts of the body are also among the most educible and skilful in the technique requisite for bringing about a desired end. Their action-patterns are indeed often the very method by which ambitions are achieved. (Class B.) And when we have reached a judgment that is deemed to be true or in accordance with the facts of the matter (Class C.), it is our "right" hand that is ready to be motivated in its defence. Even the art of writing, in the original sense of cutting, tearing, or scratching to produce a record or a design, is not at all distantly related to the functions of this part of the body.

With this clearly understood, the transition is easy to make to

Class E

Legal "Rights"; that is, Those Claims and Interests the Establishment and Protection of Which May Be Secured by Force and even Violence.[1]

As used in this connection, "right" is partially

[1] As a partial list of the significations included in this class, may be cited:

48. In the legal sense, that which justly accrues or falls to anyone, that which one may properly claim, one's due, e. g., territory, estate, dominion.
49. Particular cases of the preceding: *Right* of eminent domain, Constitutional *rights*, Corporeal *rights*, Inchoate *right* of dower, Innominate *rights*, etc.
50. Idiomatic expressions: "To be in the *right*," "To have the *right*," "With *right*," "By *right* or *rights*," "Of *right*," "To have due *right*," etc.

equivalent to *might,* since our concept here connotes an organized force,—a physical power,—which, under given conditions, can be employed for the purpose of establishing claims and protecting interests. This organized force is popularly referred to as "the Law," especially by those who indulge in back-yard altercations and cry out: "If you do that again, I'll have the Law on you!" And the ordinary man, whose six or seven years of public schooling have implanted in him the fixed habit of reifying all abstractions, understands the law as equivalent to a transcendental force of some kind which makes his threats effective. As befits the mental calibre of such a man, the law frequently becomes synonymous with the functions of the police, who are naïvely supposed to know when and how to protect everybody's legal rights. This is an error. Not only are the police extremely ignorant persons, but they have scarcely any legal status whatever. They are "the

51. Joint *rights;* a title or claim to something properly possessed by two or more persons.
52. A document substantiating a legally recognized claim or title.
53. Legally just or equitable treatment.
54. "*Right* drawn sword," drawn in a just cause.
55. The person, party, or cause which is sustained in a controversy. (Compare Ex. 47, Class D.)
56. To do one *right;* to do one justice.
57. "*Right* money"; money paid as the condition or consideration of acquiring a "right" to the purchase of land.
58. The title or claim to the enjoyment of privileges or indemnities. (A relatively unemphatic use of the term "legal *right.*")

tolerated remnant of the autocratic power which absolute monarchs once exercised over their subjects." Law and legal rights are functions of the courts, while the police are simply unattached huskies hired to bring into court those who do not come there of their own initiative. We must look elsewhere for the source of the might which legal rights are said and felt to possess, namely, in the origin and function of law itself.

Briefly stated, law originated as a means to protect men against loss of property, against bodily harm, and against damage to their personality through the actions of their fellows. It did not originate as a means to prevent or repair the damage to life or property caused by cloudbursts or lightning, or the loss of income brought about by avalanches, laziness, or disease; it had only to do with actions for which some man could be held responsible. Now the actions which produce the loss of property, bodily harm, and damage to personality are usually actions arising from, as well as leading to, emotional disturbances. Theft, murder, and libel, for example, are about the most potent stimuli to violent retaliation that can be provided. Nevertheless, it is sound psychology that most emotions quickly cool if the stimulus be withdrawn, that wrath has to be nursed if it is to be kept warm, and that absence does not make the heart grow fonder. Here is where the law performs its chief function. For the law is simply an ingenious device to get a

judgment on the conflict of human interests which shall not be tinged with the passions that provoked the conflict. And while legal procedure may not always be fair, especially in the eyes of the loser, its methods certify that it shall not be precipitous or rancorous in rendering a decision. Legal rights, therefore, are not equivalent to the capacity for revenge, but rather consist in the ability to get old quarrels looked at by new and unbiased eyes. Herein consists much of the prestige of the law, and since prestige has always been regarded as a kind of power, men are not slow to employ it in the establishment of their claims and the protection of their interests.

Law, however, is frequently misinterpreted when its function is thought to be preventative of discord, rather than judicial and equitable. Law is no guardian angel. No law can prevent the unobserved Richard Roe from murdering the defenceless John Doe; nor can it hinder the murderer (still unobserved) from altering Doe's will to his own material advantage; neither can it be guaranteed to forestall the murderer from making the false plea that Doe was about to assault his daughter. The law did not make man in its own image; according to scripture it was God who did that. Law does not set out to protect the careless or the poor in spirit. Its machinery is normally put into operation only for those with enough initiative to look out for their own interests. If a patentee knowingly

allows one infringement of his patent rights, he might as well donate his invention to the public. The law does not hunt for trouble, or carry on a bureau for the exchange of expressions of malcontent. It does not even demand that a clearly known offender of society, and one conscious of his offence, enter a plea of guilty. Actually, the function of law is simply to preserve and to restore order and peace in society, and not to define what that order and peace shall be. Were ninety per cent of the people in the world suddenly to become stubbornly devoted to thieving, the public peace would have to be redefined in terms of their attitude toward property. Moreover, as it is now, the law merely attempts to imitate the security which is provided by "gentlemen's agreements," which security is largely maintained without the help of the courts. For it is very plain that millions keep the peace, while only a few hundreds know the law. Law, then, may be fairly characterized as an impersonal referee, whose business it is to persuade and oblige the disturbers of the social equilibrium to employ the methods and standards of conduct which have always marked free men.

With this by way of introduction, it is not difficult to understand why "right" in the legal sense of the word is so closely related to *might*. For the term "legal rights" refers not only to those claims and interests which may be established and protected, but also and rather to those which *have long*

been secured by force. In other words, some of them have the advantage of the momentum of custom and tradition. Now custom and tradition, whatever else they may be, are certainly action-patterns which are generated and maintained by the bodies of human beings. They are habits, both of overt action and covert thought,—response processes of the neuro-muscular apparatus. The tenacity of these habits, moreover, is due to the combined action of two well-known physiological mechanisms, —the conditioned reflex and the circular reflex. The conditioned reflex, which is dependent upon the repetition of stimuli, is particularly prevalent where day by day the same persons, the same kinds of property, and the same predicaments of living are met with; and so we may say that customs and traditions (and with them the inevitable claims and interests) are created by the environment as much as by the organism. The circular reflex, or proprio-ceptive reinforcement of any action-tendency, governs much of our behavior, even though we little suspect it. It underlies occupational postures, idiosyncracies of gait and of facial expression, and indeed, without circular reflexes we should not have either tenacity of purpose or the ability to hold a grudge. Its function in the establishment and maintenance of those action-patterns on which tradition depends is of paramount importance. And since these two reflexes are largely responsible for the difficulty with which habits of action and thought are broken, the

support which they give to maintaining the tradition of legal rights is hardly to be overestimated. Thus, from the mechanistic point of view, the homage which we give to legal rights is after all simply equivalent to the expenditure of energy in our bodies for the purpose of maintaining particular habits of action. Indeed, in those who maintain the public peace, all the energy which goes into actions which promote the order of society is literally spent to uphold legal rights of one sort or another. It is this energy, this physical power, which we referred to recently when we said that "right" is partially equivalent to *might*.

And yet, in spite of the apparently great amount of muscle power that is, so to speak, behind all legal rights, from the logical point of view, the use and effectiveness of this power is altogether contingent upon the exact nature of the claim and interest which one desires to be secured. The logical statement of the situation here involved would take the form of a hypothetical proposition, namely, *If* the claim or interest is of a certain kind, *then and then only* may it be established and protected. And while this might seem at first to indicate that legal rights were seriously lacking in point of authority, yet this is not the case, for the strongest possible assertions that can be made are always couched in the form of hypothetical propositions. As Couterat states in his "Algebra of Logic," "Every proposition which implies another is stronger than the latter, and the

latter is weaker than the one which implies it." The blunt categorical proposition is far less powerful, since by itself it implies nothing whatever, whereas hypotheticals leave no doubt as to the necessary consequences. All the laws of nature, which, by the way, cannot be broken, are stated in hypothetical form. Moreover, since it is the antecedent, and not the consequent, of a hypothetical proposition which gives it strength, it is easy to see that any particular claim and interest is rendered all the more likely of being established and protected *if* similar claims and interests have long been recognized in the law as valid. In practice we find this to be the case: the common law which is the oldest code is also the one to which new claims to legal right are invariably referred.

Having looked at the picture of legal rights from one angle, let us now look at it from another. While in strict logic the statement of these rights in the form of a hypothetical imperative gives them an undeniable strength, it must now be admitted that from the pragmatic point of view it signifies at times a discouraging weakness. For it has often been the case that the establishment of claims and the protection of interests has in practice depended upon such vexatious variables as the pet theories of experts (e. g., alienists), the hunger, fatigue, and stubbornness of jurymen, the internal secretions of judges, a crowded or empty condition of the jails, current sociological theory, and even such astonishing things

as one's affiliation with secret societies, or one's political "pulls," not to mention, except by a passing remark, the determination of a litigant to carry his case to the higher courts clear beyond the ability of his antagonist's purse to follow him there. So that if we ask whether some particular claim or interest can and will be established or protected, the real answer in a large number of border-line cases is, "Nobody knows." Justice, who carries in her hand a balance whereby to weigh the evidence fairly, has also her eyes blindfolded against seeing what manner of weights are put into either pan. This defect of law, however, is not to be wondered at when we remember that legal theory cannot anticipate all of the innumerable claims and interests which either honest or knavish persons are likely to support as valid. If the theory of law had been as complicated as human society has become, it could not have accomplished the half of what it has already achieved.

From all this it can be seen that the assertion of a legal right is not always equivalent to its substantiation. Times change, bringing with them new faces and other minds, new problems and new interpretations. Nor, for that matter, are all commonly accepted rights under the law equally to be supported by physical force. Strictly speaking, only those rights which imply a correlative duty are truly legal rights. Reciprocity of action is essential. For example, if Baker has a legally recognized or substantiated right to do, receive, or enjoy something, it is

the duty of Atkins and others not to infringe or nullify that right. Mark also, that both duty and right here imply that physical force may be directed against some specified person, or against all persons generally in case of need, in order to establish the claim and protect the interest involved. However, as may be already suspected, not everything that is legally sanctioned or which enters into legal machinery has the same force behind it as in the case we have just cited. The right of ownership, for example, which to the layman seems to be a unit right, involves five distinct things, as follows: (1) the *jus disponendi,* or right to give away, (2) the *jus utendi,* or right to use, (3) the *jus abutendi,* or the right to abuse, (4) the *jus prohibendi,* the right to keep others away, and (5) the *jus possidendi,* or the right to recover the property. But only one of these is, strictly speaking, a right in the sense that it involves a correlative duty, namely, the *jus prohibendi.* For the *jus disponendi* is simply a power, and not a right at all: and the *jus utendi* is wholly negative in the legal sense, implying non-interference in the exercise of a natural power; whereas the *jus abutendi* is a liberty (neither a right nor a power) whose exercise is nominally unrestricted: while the *jus possidendi* is simply the legal capacity to get back that which one is said to own.

This ends our account of legal rights. We now pass to the consideration of the other uses of this most comprehensive ethical concept. Somewhat by

way of contrast to that which has just preceded, let us at once consider

Class F,

under which are comprised what are popularly known as "moral" *rights*.[1]

[1] The significations included in this class are numerous and various. As follows:

59. "In conformity with the moral law; permitted by the principle which ought to regulate conduct; in accordance with truth, justice, duty, or the will of God; ethically good, equitable, just."
60. "A poor man has no [legal] right to relief, but it is [morally] right that he should have it. A rich man has a [legal] right to destroy the harvest of his fields, but to do so would not be [morally] right."
61. "Goodness in actions is like unto straightness; wherefore that which is done well we term right."
62. "Cousin of Hereford, as thy cause is right,
So be thy fortune in this royal fight."
63. "He
Who now is Sovran can dispose and bid
What shall be right."
64. "That which is consonant with equity, or the light of nature; that which is morally just or due."
65. "Right conduct; a just and good act, or course of action; anything which justly may or should be done."
66. "Wrest once the law to your authority;
To do a great right, do a little wrong."
67. "Too fond of the right to do the expedient."
68. "With firmness in the right as God gives us to see the right."
69. *The* right; the cause of truth and justice.
70. That which is proper for or incumbent on one to do: one's duty. (Obsolete.)
71. The standard of permitted and forbidden action within a certain sphere. (Obsolete.)
72. "Obedience to or harmony with the rules of morality, justice, truth, and propriety."

A casual glance at the appended list of the members of this class might lead one to consider them simply as a continuation of legal rights, but this is by no means the case. Albeit moral rights are identical with legal rights in so far as they imply a multitude of human claims and interests, they are nevertheless emphatically different from them on a much more important point. Moral rights lack all impli-

73. "Acting in accordance with the highest moral standard; free from guilt or blame."
74. "A God of truth and without iniquity, just and right is his name."
75. "I have made him just and right,
Sufficient to have stood, though free to fall."
76. "Right reason: that which recommends itself to enlightened intelligence: some inward intimation for which great respect is felt and which is supposed to be common to the mass of mankind."
77. To be in the right; "to have justice, fact, or reason upon one's side."
78. In prepositional phrases, with, by, of right; properly, with reason, justice, etc.
79. To have a right. To have reason or cause; hence, to come near, have a narrow escape from (*sic!*); e. g., "I'd a good right to be run over by the train this morning." (Colloquial.)
80. "Divine right of kings."
81. "Right way; the way of moral excellence or spiritual salvation." "But you are a presbyterian . . . ?" "I am, sir; praised be the light that shewed me the right way!"
82. Of persons and dispositions; disposed to do what is just.
83. Of belief; orthodox, true. That which ought to be accepted or followed.
84. To do justice to; to relieve from distress; to vindicate; often used reflexively.
"So just is God, to right the innocent."
85. To do right; to act according to the "law or will of God."
86. To feel right toward a person; to be either kind, or sympathetic, or to cooperate with him.

cations of an organized physical force to compel their recognition. The only compulsions that can be said to assist in the establishment of the claims and the protection of the interests comprised under the scope of moral rights are the approval and disapproval of the group which undertakes to recognize and support them. In fine, these compulsions amount to the force of public opinion. And while this force is at times provocative of changes in the method or content of the law which may later be recognized as good, on the whole, public opinion is usually so unspecific and inconstant as to be wholly negligible as a power to enforce any demands. Certainly no jurist regards moral right as obligatory.

On still another count moral rights show a serious defect. For when we say that the enforcement of the claims and interests comprised within the scope of moral rights depends upon the approval of the group, it must not be supposed that the actions of any group and the actions which it approves are necessarily one and the same. This is a sour paradox, but its appropriateness cannot be successfully denied. The standard of conduct which any group subscribes to under pressure, either in writing, or before an audience, is singularly different from the behavior of the group under easier circumstances. Moreover, it is the exception, and not the rule, for those who dominate a group,—whether such masters be parents, political bosses, or any other form of lordling,—to hold their charges to a

stricter accountability than they themselves, removed from correlative restraints, recognize as imperative. Doubtless, in the execution of the law, many a time privileges are granted to people of wealth and prestige which are denied to the humbler petitioners at the bar; but the difference between legal and moral practice is significantly this: that in legal practice evasions are no integral part of the machinery. This does not amount to a condemnation of moral rights: it is merely holding up the mirror to man, in order that he may see himself clearly. All in all, consistency may be as impracticable as it has been unsought for in the daily affairs of men.

However, when we consider the unusual claims made in behalf of moral rights, there are valid exceptions to be taken to them. For while in the strict legal sense, moral right is impotent, yet according to the expressed opinion of the untutored majority, moral right is far mightier than legal right. Let us see why this is so.

In the first place, not all human claims and interests are or can be protected by law. It is not the purpose of law to be rigid. However many statutes, for example, are enacted year by year, the interests they are supposed to protect increase too rapidly to be covered by such statutes. Moreover, as in the case with the right of ownership, many powers and privileges are granted, the exact enjoyment or exercise of which no law could either predict or circumscribe. Hence there always remains a residue of

interest that is not comprised within the scope of matured legal tradition. But it is just these newer interests for which some persons demand most emphatically the right to be satisfied. We live not in the past, but on the foremost edge of time, and we are prone to demand as much support for our youngest claims as for those which have a thousand years of legal recognition behind them. Now, undoubtedly, many claims are insufficiently recognized by law. When, however, in the pause before this recognition is secured, people begin to claim for such interests a "superior" moral right to be satisfied, and in comparison to that "superior" right assert that legal rights are merely unfounded prejudices, the charge of inconsistency can be leveled directly against them. Ignorance of the function and scope of the law is no excuse for holding it up to ridicule. Indeed, it is not at all certain that the law could include the satisfaction of every human claim and interest whatever without becoming itself destroyed by this inclusion.

In the second place, there are some persons in whom the law's delays, as well as their experience with the *un*evenhandedness of justice, has provoked a deep-seated prejudice against particular lawyers and jurists, which prejudice, by means of the fallacy of composition, they readily transmute into a scorn for whatever is expressly denominated as legal. Under such conditions the penchant for moral rights may be often nothing but the product of a mind that

has become malcontent with things as they are; with the result that solace is sought in the fiction of a set of moral rights which are regarded as possessing a "higher" or final authority. From such a person come Examples Nos. 59 and 76, recently cited. Two comments can be made upon such a case as this. The first of these is that it is quite certain that no man who has become so pessimistic will see his way clear to the solution of the problem that has given him so much tragic concern. As Spinoza says, "The will and the intellect are one and the same," but as Spinoza also hinted, the intellect and the emotions are not. Moreover, such malcontentedness is relatively easy to annul: let anyone who curses the law begin to make use of it to his advantage, and his "suppressed complex," as the Freudians would say, rapidly evaporates.

A third and final reason why moral rights and the so-called moral law are sometimes regarded as superior to all things legal is that among so many persons the curious conviction obtains that they are individually the pets of Providence, and that consequently whether they stir themselves or not, become sagacious or remain meek as lambs, their affairs will be satisfactorily adjusted without their exertions. Under such illusions many persons take refuge throughout their lives, forgetting curiously enough that the order of nature has not supplied them with benevolent guardians, tutors, and managers. The result is that to such people right is synonymous

merely with what *ought to be,* rather than with even a small part of what already is. But when they thus employ the term right, it is debased. One often hears such people say with regard to a catastrophe: "Oh, well, I suppose we shall have to make the best of it,"—a remark that is rarely prophetic of anything more than continued brooding. If it prophesied the accumulation of technique for a continuous, constructive effort, their moral rights would not be so bereft of reality.

Class G

Here the word "right" signifies certain unspecified and unrestricted liberties and privileges sanctioned in the manner of customs, the only authority behind which is the threat of social ostracism should they be disregarded.[1] As will be observed at once,

[1] We cite here:

87. "The first place is yours, Timothy, in *right* of your gray hairs."
88. "I have a perfect *right* to grieve over him."
89. "She has a *right* to be admired, for she is beautiful."
90. "Not only is she a peeress, but she has fourteen thousand a year in her own *right.*"
91. "Put your bonnet to the *right* use; 'tis for the head."
92. "Why do you twist words out of their *right* use?"
93. "Mr. *Right,*" "Mrs. *Right,*" the destined husband or wife.
94. "That part of the quarry given to the hounds as their share or due."
95. "A stag's full complement of antlers, consisting of the brow, the bay, and the tray."
96. "To do one *right,*" to pledge one in a toast. (Compare: "*faire raison à.*")
97. "The *right* word is always a power, and communicates its definiteness to our actions."

some of the members of this class might, if one prefers, be included in some of the other classes of "right."

Class H

That which is most convenient, desirable, or favorable; conforming to one's wish or desire; to be preferred; fortunate; lucky, etc.[1] Some of these examples, like those in the preceding class, may in the eyes of some judges be more appropriately classi-

[1] For example:

98. "I should have been a woman by *right.*"
99. "The lady has been disappointed on the *right* side."
100. "If he should offer to choose, and choose the *right* casket, you should refuse to perform your father's will. . . ."
101. Idiomatic colloquial phrases expressing satisfaction or approval: as "Your conduct and dress are all *right.*" "He has done it all *right.*" "Are you ready? All *right,* go ahead."
102. To set *right;* to adjust or correct something out of order. "Your mother's hand shall *right* your mother's wrong."
103. In a satisfactory or proper state or order: "It's a snug little island, a *right* little, tight little island."
104. Skilfully performed, correctly done: "The sum is not *right.*" "The drawing is not *right.*" "Nothing goes *right.*"
105. "To *rights,*" properly, fittingly, as, for example, "She put the room to *rights.*"
106. "I put him right on the matter," that is, corrected or directed him, or both.
107. The safe, advantageous, appropriate, or desirable side of anything, as, "A widow on the *right* side of thirty."
108. Fitting, proper, appropriate, exactly according to what is required or suitable, as, "Things of the *right* size."
109. The outward, front, or most finished surface of anything, as, "The *right* side of a piece of cloth."

fied in another place. If so, let the change be made. There is undoubtedly an echo of Class B and of Class F in several instances. But a more important item seems to be that here are unmistakable hints of an adverbial or expletive signification for our concept. This hint is fully carried out in the final division,

Class I

in which the term "right" signifies "very," "in a great degree," as in certain titles: (111) *"Right* reverend," (112) *"Right* honorable," as well as in the expressions: (113) *"Right* truly may it be said," and (114) "The word 'cootie' is *right* old Scottish." However, as this use of the concept *right* is often to be interpreted as signifying "justly entitled to the name of," or "having the true character of," Class I may be regarded as a footnote to Classes C and G.

This completes our search for the significations of the word "right." Nevertheless, all this is merely a preliminary step toward the main business of our investigation, namely, the discovery of the action-

110. In good health or spirits, sound, comfortable, or sane, as:
"An old uncle of mine who isn't exactly *right.*"
"He is not in his *right* mind; he is talking nonsense and is stark mad."
"The heart's aye the part aye
That makes us *right* or wrang."
"'Oh,' said Mr. Winkle the elder, 'I hope you are well, sir.' *'Right* as a trivet, sir,' replied Bob Sawyer."

patterns which are implied by these nine classes we have just delimited. We have seen that these classes are all subtly connected, and this leads us to hope that some greatest common denominator will be found that will factor into all of them. It is also apparent that as we pass from Class A to Class E, we reach a climax, after which we decline; that up to the climax there is order and dignity, and that from Class F onwards our array consists mostly of scraps and debris. Our problem, then, is to exhibit not only the motor attitude which each class implies, but also the procession of such attitudes throughout the whole nine classes. For only by so doing shall we be able to comprehend the meaning of this important ethical concept.

The Meaning of the Word "Right"

1. As deduced from Class A. It will be recalled that this class signifies *straight* (not curved or crooked in any way), *direct* (by the shortest course), and *immediately* (in the quickest time). These words, moreover, refer not only to events in nature, but also and more particularly, to human activities. It has also been pointed out that when a man can proceed in a straight line toward his objective, he will proceed directly, and arrive there in the quickest possible time. Such behavior is, within the limits hitherto defined, described as *right*. Now what does all this involve in the way of action-patterns?

It involves, first, perception of the goal, second, ability to keep the goal in mind, and third, energy sufficient to attain it. According to Max Meyer, one of the instincts manifested by a hungry organism is "to proceed forward in a straight line" (!) And whether this be truly instinctive or not, the example illustrates our point very nicely. For any organism vexed with hunger of any sort whatsoever (and there are, according to the poets, many kinds), will do "right" in following Max Meyer's advice. The action-pattern implied in all this is not difficult to determine. It is the coordination of motor activities requisite for the movement of the whole body speedily through space, unwaveringly toward its objective.

The complete analysis of the mechanisms by which such behavior is accomplished would be both too difficult and too exhaustive to be undertaken here. We may, however, point out some few of the salient factors involved. It has been shown that, so far as Class A is concerned, to do *right* is to proceed directly and immediately, and along a straight line, if possible, to the desired object. Such behavior requires both strength and skill; from which it also follows that a feeble, untrained body will be unable to do "right" in a great many cases, simply because it cannot reach its goal in the face of obstacles. This is our common observation. Before a baby learns to walk, it cannot proceed directly or immediately across a floor. Neither can an exhausted

man, unable to use the sun for a compass, find his way to safety out of a tropical forest. For a person in his predicament, things are not likely to come out "right." Furthermore, in a great many cases of the same sort, skill and strength are *both* required; neither one alone is sufficient to attain the desired end. Let now the psychologist tell the story of how the attainment of skill depends upon a standard equipment of sense organs, a sound and complete brain, and muscles from which sensory stimuli elicit precise responses. Let also the physiologist relate here how bodily vigor likewise depends upon the interrelation of internal functions: how the heart, lungs, brain, muscles, thyroid, liver, and adrenals all work together to make any effort successful and complete. When this has been said, the meaning of the word "right" as defined in Class A will have been more fully revealed.

2. As deduced from Class B. Here the word "right" is used to describe the method or object by which any desire may be realized. The requirements for membership in this class appear at first to be less rigid than was the case with Class A. The speed of motion that was stressed in the former class is inessential here, as well as the necessity of proceeding by the shortest course. Here also a beefy body is not as imperative as are skill and sagacity. But let us not make a favorite of either class before we have heard the whole story. And first let us ask, what is the typical action-pattern

implied by Class B? The answer is not difficult to give. There is a phrase, "selective excitability," which psychologists have long applied to the situation where a sensori-motor mechanism is attuned by practice to respond to one specific stimulus, and to be entirely unresponsive to others. We exhibit this selective excitability every time we take "our" hat from the crowded coat-room, choose "our" favorite cigar from a case full of attractive Havanas, or fumble thoughtfully in "our" pocket for a cent to give to the crouching beggar. In every such case, we are said to employ the "right" object and perform the "right" action. Actions of this sort involve choice, which as we have already hinted (See footnote, p. 32, Chap. II.), involves the use of one member of a pair of antagonistic muscles. Consequently, we may describe the action-pattern underlying the use of "right" in Class B as any sort of behavior which involves selective excitability and selective activity. So that whatever Class B lacks in generality as compared with Class A, is compensated for by an increase in precision and, what is equally important, by an *economy* of human energy in the pursuit of the desired object. The importance of this last factor has already been sufficiently hinted at in the quotation that appears on the title-page of this book.

3. As deduced from Class C. The change from Class A to Class B involved an increase in what is known as intelligence, that is, the ability to solve

new problems. The change to Class C may be regarded as involving a continued advance of the same general character. But this change involves something more. For, as we have already stated, "right" now becomes "descriptive of any statement which reports the facts: of any opinion or judgment that is correct: and of any person who judges, thinks, or acts in accordance with the facts or truth of a matter." Two changes in emphasis are consequently to be noted here. First, the word "right" is applied to utterances rather than to deeds alone; and second, a metonomy is introduced in the application of our concept to persons who make correct statements. This shift of emphasis from an action to the description of it, and from the description to the describer need not cause us any difficulty, even though it envisages for us a million years of the education of the human race.

The success of our search for the meaning of our concept is here dependent upon the function of speech to imply and predict action,—a function which we have already commented upon in our second chapter. Words, like thoughts, are either reminiscent of overt action, or else they assist in preparing us for it. When, then, a man uses the word "right" to commend either statements or persons, it is the same as if he were to say: "Either there were, or there are, or there may be, objects and events as you describe, and I think as you do about them." The action-pattern here implicated is plainly that of *belief*. It

involves a lowered threshold with respect to the person or statement called "right," and a correspondingly higher threshold toward those persons or statements which contradict what is accepted. And as was the case with Class B, this action-pattern involves the use of one of the halves of a system of antagonistic muscles, since the "emphasis here is upon true opinions and judgments in contrast to false ones." This, however, is not all that can be said upon this point. For every case of belief is a case of constitutional readiness so to respond. And while we do not exactly know how the body provides such predeterminations, if the theory of action-patterns is sound, the conjecture is not unfounded that belief is a function of chronic postures maintained in the muscles of the voluntary system.

Evidences in favor of this conjecture are readily supplied from our everyday scrutiny of the faces of our fellow-men. The beggar's hand is actually a different hand than the hand of the donor; as he sits on the sidewalk, his predetermination to receive alms is patent in the chronic posture of even his palm and fingers. The courtesan not only manifests her willingness to exchange smiles by the chronic postures in her eyelids and mouth, but with a fitness that a De Maupassant might celebrate, she also acquires a carriage that betokens her particular vocation. Contrariwise, the generous, affable man gives evidence that his traits are at least muscle-deep; while every actor will confess that if he gets into the ade-

quate posture, the character he is depicting is automatically portrayed. Those who pray also confess that there are certain bodily attitudes which hinder, and others which assist, the flow of sentiment which they desire. Photographic evidences such as these, however, are not the only proofs we possess of postural predeterminations of action and thought, for it is sound physiology that in the multifariously complex musculature of the body, there are unnoticed postural tensions being generated and maintained all the while. And since, according to the all-or-none principle of nervous and muscular activity, every motor tendency is a truly positive physiological event, whenever we manifest belief, some part of the body is preparing to execute a movement appropriate to the assertion implied. Indeed, we may safely postulate that a large portion of what we call our individuality is a function of those chronic postures which our habits have hitherto established in our motor mechanism,—which postures ever thereafter determine what we shall do, say, and believe.

4. As deduced from Class D. Here the word "right" is used to signify "the hand which is normally the stronger," whence, by association, it refers to a variety of related things, as hitherto indicated. We have previously noted that the concept "right" is a term we often use when the attainment of a purpose is under consideration, and here we again see the same motif displayed. Everybody knows

that the "right" hand is important in the acquisition of skill of all sorts, and in getting in touch with the things we call "good." Evidences of the paramount usefulness of the "right" hand to carry out overt actions are ubiquitous. Moreover, levers, pliers, and a hundred other tools are simply extensions of its functions and magnifications of its powers. What, then, are the action-patterns suggested by this use of our concept? The answer is extremely simple. The action-patterns we seek are the innumerable activities of the *right* hand itself. For, as we have previously shown, even to think of the hand involves neuro-muscular activity in it. What the right hand *does,* is what the concept "right," as applied to the hand, *means.* And if, for any reason, the "right" hand is incapacitated or missing, some other part of the body executes the appropriate gesture or manœuvre.

5. As deduced from Class E. The transition from Class D to Class E is made on the basis of a common element that is shared by both. We have just seen that the "right" hand is the stronger and the more adroit, and that consequently it is the one more adequately equipped to turn our wishes into wills. No logician, then, is required to convince us that legal "right," in the sense of being equivalent to might, connotes the same sort of strength and force as are involved in the grasp and tug of the hand. Were the policeman the pure embodiment of legal "rights," the action-patterns implied by Class

E would be easy to determine, since they would be simply the total behavior of that functionary while on his beat. The problem before us is, to be sure, not quite so easy of solution as reference to the policeman would make it, but nevertheless, our previous discussion of legal "right" has hinted just what that solution is to be. For legal "rights" are one and all concerned with the security of whatever things a man calls *his,* together with the adjustment of conflicting claims regarding them. To enumerate in detail all the action-patterns here implied would be equivalent to making an inventory of all the deeds that had ever been performed to preserve property, life, and personality, and to maintain and restore peace and order in society. Let the historian open his books and show us the panorama of these achievements. And while we should see upon many of his pages portrayals of torpid conservatism, ruthless domineering, and magnificent cunning, we should also behold examples of that impersonal referee of whom we have already spoken, whose business it is to persuade and oblige the disturbers of the social equilibrium to employ the methods and standards of conduct which have always marked free men. He who would clearly comprehend such a panorama must needs give it more than a fugitive glance; for as it required time to be created, so does it require time in which to be appreciated.

6. As deduced from Class F. Moral "rights" are all those unsecured claims and inexactly speci-

fied interests whose only protection is the approval and disapproval of the community, reinforced at times by an appeal to a super-human protagonist. A comparison between the motor-attitudes implied by Class E and Class F reveals several important differences. Juristic thinking, which we may for convenience characterize as the attitude implied by Class E, is on the whole logically coherent; moralistic thinking, on the contrary, commits every known logical fallacy. Again, juristic thinking is content to regard human problems capable of solution at the hands of human beings, and to consider that the verdicts of unruffled men and of men expert in their lines is final; while moralistic thinking is ever prone to employ methods which, on account of their provincialism and importunity, do not stand analysis at the hands of unbiased investigators. Finally, the "higher judge" which moralists assert stands behind the claims they make, is simply a misinterpretation of the meaning of long unrelieved tensions which have accumulated in their skeletal muscles. For while we do not declare that all claims unsecured by law are ethically invalid, we do nevertheless assert that the typical moralist's attitude toward all such unsecured claims is not one that is suited to bridge the gap between our liquid matter and its good. Nevertheless, we may say without equivocation that behind every declaration of moral rights there is an anxiety lest some dependable good be lost, and this motor attitude we conceive to be the greatest com-

mon divisor of all the significations included under Class F.

7. As deduced from Class G. Although this class resembles the preceding one in that it refers to customs whose maintenance depends upon the approval and disapproval of the group, Class G lacks all of the fiercely Stoical and Puritanical elements found in Class F, just as it lacks the logical rigor pertaining to Class E. The action-patterns implied by this present class are rather those of a courteous gentleman, who persuades whenever he can by a gesture, but who does not try twice to persuade those who will not yield to that kind of a suggestion.

8. As deduced from Class H. Since "right" here signifies that which is convenient, desirable, favorable, etc., the action-patterns which it implies are practically identical with those of the first three classes of "good." Certainly every example previously cited under this class points to an outgoing reaction.

9. As deduced from Class I. The adverbial use of our concept here implies merely a gesture of positive emphasis that may be added to any other action-pattern.

Having previously sorted the manifold significations of the word "right" among these nine classes, and having subsequently shown what the organism was doing when it employed this word with respect to each of these classes, it now remains to discover whether any one action-tendency is commonly hinted

by each and all of these nine classes. If such a common tendency can be discovered, the word "right" may then indeed be said to possess all these various significations indicated in our array; otherwise, we shall err in considering it to be one and the same word in all the examples previously cited. In attempting to discover and certify such a common tendency, moreover, we shall employ the same method suggested for the summarizing of the meanings of the word "good." We recognize that in the title by which each class of "right" is denoted, there is no presumption that such a title does more than indicate the general trend of that class; logically, the titles merely imply the greatest common divisors of the many phrases included in the classes. So that when we now attempt to define the common tendency in all the action-patterns we have just deduced from these nine classes, we are to consider only their similarities, while discarding their differences. There is nothing novel in this method; it is simply the way in which all concepts have been unconsciously derived.

Such a common tendency is not difficult to discover. Each class as we defined it in behavioristic terms turned out to imply an action-tendency that played an important part in the behavior of human beings while in the pursuit of the objects they desire, or in the attainment of their ends, however variously conceived or projected. Let us, then, bring the whole matter to a focus by saying that *whenever we*

describe a behavior situation in which the dominant feature is the controlling and directing of human energies, the employment of technique to further man's purposes, or the attaining of any good whatsoever, the critical word is "right." This is, indeed, what our concept, as we have analysed it, finally *means.*

Further than this a strictly scientific ethics does not go, and, moreover, further than this no intellectually honest man will go. Right simply means what people use the word to signify,—employing it either as a gesture to point out some object or relationship in the environment, or else as an index of what sort of behavior may be expected of them in the future. Accordingly, all insistence on a "higher and immutable right" as *the one real* meaning of the term is either a sign of mal-observation or of logorrhea. And if anyone still insists on knowing how one determines what is *right,* we refer such a person to our array of 114 terms, where in each case the basis for such determination can be inferred. But if such a person still demands an ultimate and irrefutable criterion, the only thing left for him to do is to attempt to be God; but it is suggested in advance that the rôle of deity might, under the circumstances, be even more difficult to play than the more familiar rôle of man.

CHAPTER VI

THE MEANING OF THE WORD "WRONG"

"The human mind is capable of having very many perceptions, and the more capable, the greater the number of ways in which its body can be disposed." SPINOZA, "Ethics," Part II, Prop. 14.

Lexicographers are wont to state that "wrong" is the opposite of "right" in all of its principle senses, but as can be seen at a glance from the appended array,[1] this statement cannot be taken to

[1] As follows:

1. Crooked, twisted, or wry. (Obsolete)
2. Disordered, not properly adjusted, as in the expression: "I've heerd my aunt say as she found out summat was *wrong* wi' Nancy as soon as the milk turned bingy."
3. Incorrect, or uncorrected; that is, not according to requirement, intention, purpose, or desire, as *wrong* ideas, *wrong* courses, the *wrong* font of type, etc.
4. Esthetically undesirable or unsuitable, as,—
   "You have put the *wrong* side of the cloth outermost."
5. Erroneous or mistaken belief or assertion.
6. "In the *wrong* box" (slang), in an awkward situation, mistaken.
7. Perverse, wilfully mistaken or erroneous. (Cf. "evil.")
8. Unjust action; violation of obligation or propriety; a tort.
9. Harm or "evil" inflicted; damage or detriment suffered; an injury, mischief, or hurt; pain imparted or received.
10. To be "in the *wrong*"; to be mistaken, to act or think incorrectly or unjustly.
11. "To have *wrong*"; to be mistaken; to act erroneously or unjustly.

imply that any such extensive list of significations as we exhibited in our analysis of "right" can be reproduced here. Indeed, in what respect "wrong" is the antonym of "right," or, in other words, how far this pair of terms illustrates the law of reciprocal innervation, can be seen only from a detailed comparison of the two, as follows:—

RIGHT	WRONG
Class A. The word "right" as descriptive of certain mathematical relationships and physical functions.	
Sub-class I.	
"Straight," (a word in current usage)	negated by "Crooked," Ex. 1, (obsolete).
Sub-class II.	
"Direct"	No antonym

12. "To have *wrong*"; to suffer injury; e. g., "Cæsar has had great *wrong*."
13. "To put in the *wrong*"; to represent erroneously.
14. "To go *wrong*"; not to run smoothly, as of machinery.
15. "To go *wrong*"; to go astray from the intended direction.
16. "To go *wrong*"; to do "evil."
17. To *"wrong"*; to treat unfairly, unjustly, or harmfully; to oppress, offend, or injure.
18. "To *wrong*"; in an old nautical sense, to take the wind from the sails of a ship which is sailing in line with another to windward.

RIGHT	WRONG
Sub-class III.	
"Immediately"	No antonym
Class B. "Right" as descriptive of the method (or object) by which the desired end can be obtained	negated by Examples 3 and 5; but only if we override the objection that "right" here usually refers to one specific method or object, while "wrong" can refer to any one of a number of unspecified things.
Class C. "Right" as descriptive of any statement that reports the facts; of any opinion or judgment that is correct; and of any person who judges, thinks, or acts in accordance with the facts or the truth about a matter..	negated by Examples 3, 5, 7, 9, 10, and 11, except for the difference just previously mentioned, and omitting examples 31–35 inclusive on p. 80.
Class D. "Right" as the distinctive	

RIGHT	WRONG
epithet of the hand which is normally the stronger	No antonym
Class E. Legal "rights"; those claims and interests the establishment and protection of which may be secured by force and even violence	negated only with respect to some particular cases of "right" by Examples 8, 9, and 17.
Class F. Moral "rights"	negated by Examples 7, 8, 9, 10, 11, 13, 16, and 17; but only in the same way that moral "right" is incompatible with legal "right."
Class G. Unspecified and unrestricted liberties and privileges	negated restrictively by the single example of No. 18.
Class H. That which is most convenient, desirable, or favorable; conforming to one's wish or desire; to be preferred, etc., ...	negated by Examples 2, 4, 6, 9, 10, 12, 13, 14, and 15.

RIGHT	WRONG
Class I.	
"Right" signifying *very, in great degree*	No antonym

This comparison obviously reveals no basis for the statement that "wrong" and "right" are complete antitheses to each other, at least in the fine sense that *up* is the opposite of *down, in* of *out,* or *east* of *west.* So that, if we accept the word "right" as descriptive of a behavior situation in which the dominant feature is the controlling and directing of human energies, the employment of technique to further man's purposes, or the attainment of any "good" whatsoever, the word "wrong" cannot,—either according to the detailed list of its uses just presented, or according to the above scheme of its logical relationship to "right,"—be said to be the true antonym of that word. The law of reciprocal innervation does not, in its integrity, apply here.

How then shall we explain the fact that people so habitually say and feel that "wrong" is the opposite of "right," if it cannot be admitted that antagonistic muscles are always employed in the thoughts and the acts to which these two words refer? Perhaps the following interpretation will answer. Logicians are accustomed to say that any universal proposition, any sweeping statement, such as, "Every swan is white," or "No aliens need apply," is contradicted by the admission that one single exception is to be

allowed. But obviously, such logical contradiction, such admission of a lone but effective exception, is not equivalent to granting that "No swans are white," or that "Every alien is requested to apply." Nevertheless, the tradition among logicians is that with the granting of one such exception, the sweeping statement originally made is held to be untrue, and hence, false. In physiological terms (than which there are none more fundamental), contradiction is for the logician equivalent to a partial but effective inhibition of any fully developed action-tendency. When Plato would say, "You may all now come in to dinner," but is deterred by seeing Diogenes muddying his feet in order to tread the more scornfully on the clean banquet floor, Plato's action-pattern of wholesale, cordial invitation is suddenly interrupted. And, *so far as Plato's emotions are concerned,* the need to make one important exception in his invitation, is very much like having to turn the whole company out of doors. This tendency for an emotional repugnance to blot out all sense of proportion is clearly illustrated in certain oft-repeated fables. The story of the involuntary guest who had not on a wedding garment, of the ninety and nine sheep, and of the rich young man are cases in point. Similar examples may be found in the behavior of any household. The vexed hostess is heard complaining that one little *faux pas* on the part of her serving-girl "completely spoiled the whole evening." The sweet young thing whose lover arrives a quarter of an hour

later than his appointment accuses him of being elsewhere enamoured to stay. The wife whose husband forgets only one of her twenty birthdays since their marriage often finds it impossible to overlook the single, unhabitual fault. It is not that such people crave or dote on perfection; they do nothing of the sort: it is only that their behavior mechanisms are unable to readjust quickly to another stimulus than the one which they have expected, and this failure to readjust releases energies by way of the viscera instead of along other and more pacific pathways.

All this has an important bearing on the meaning of the word "wrong." We saw that this word has only 18 significations, as compared with the 114 significations of "right." We also saw that it is only partially antagonistic to the concept to which it is commonly opposed. And it has further been revealed that our customary logic makes a single exception the grounds for an assumption of contradiction. On the basis of these observations, then, we may declare that "wrong" refers to some very special behavior situations where human energies cannot be controlled and directed as desired, where the employment of technique to further man's purposes has been hindered, and where "good" cannot be obtained. This, however, is not equivalent to saying that "wrong" is the antonym, the unqualified contradictory, of "right," any more than red is the opposite of blue, or coffee the opposite of tea.

A Physiological Warrant for Ethical Optimism

A question of considerable importance both in physiology and in ethics arises when we ask why the concepts "right" and "good" have so many more significations than do "wrong," "evil," and "bad." We have already emphasized the relation between speech and conduct sufficiently to indicate that upon the answer to such a question something essential for a technique in ethics depends. A word can have a great number of significations only by its being employed in a great variety of situations, and this means that very many different specific responses are implicit in the use of our most comprehensive concepts. Contrariwise, with a word of fewer significations, fewer such responses are implied. Now we have already cited the fact that "good" and "right" refer primarily to outgoing (extensor) reactions, and that "wrong," "evil," and "bad" signify withdrawing (flexor) reactions. Are we, then, summarily to conclude, without any further knowledge of the body's mechanisms, that since we seem to use our extensor system in a more diversified manner than our flexor system, the muscular equipment of the former is superior to that of the latter?

If we do so conclude, we shall be in error. It is the opposite that is nearer the truth. Both larger and stronger, and, on the whole, more easily educated muscles exist in the flexor than in the extensor

system. The innumerable capacities of the half-closed hand are representative of this superiority. Still more important, however, is the fact that the flexor system is practically the dominant system in the human body. The hinges of the knee, hip, shoulder, elbow, wrist, and jaw are more often, more strongly, and more readily closed maximally than they are expanded to the full. Besides, occupational postures are almost universally crystallized withdrawing responses. Where, then, shall we look for the answer to our question?

We shall look directly at the behavior of the organism as a whole. While it is admitted that flexor actions are stronger, more numerous, and more universal than are extensor reactions, yet when we consider how the flexor reactions dispose the body toward its environment, we shall at once have light on this curious problem. For the effect of such reactions is to cut off the body from a large part of the environment, and consequently to reduce the possibility of effective contact with it. Stooping, crouching, bowing the head, and lowering the eye are significant examples of flexor responses which reduce the span of perception, while every man knows that activities of the opposite character allow a greater number of stimuli to come in contact with his eyes and his ears. Consequently, even though flexor actions will always be in the majority, extensor actions have the advantage of providing the conditions under which a greater variety of stimuli can be

presented to the organism. This is the same as saying that the open-minded person necessarily becomes discriminative and exploratory, while the opposite type is left to stew in his own juice. The flexor type of man is, indeed, in the end reduced to contacts with his own body, while to the extensor type of man his body is only one of the many sources of motivation, the rest being in the external environment. It seems thus to be primarily due to the very mechanics of the organism that the words "right" and "good" have a greater variety of significations than have the words "bad," "evil," and "wrong."

One additional word, however, can still be said. As we have already indicated, these three so-called negative ethical concepts are all descriptive of behavior situations in which thwarting and inhibition are dominant symptoms. Henceforth, however, thwarting and inhibition will be understood as temporary interruptions of an outgoing reaction which would have eventuated had the environment contained the stimulus to which the organism was attuned to respond. As we say in common speech, a desire is not satisfied by being denied, and from our every-day experience we know that great aggravations produce as much scheming as do our easiest successes. He who casts his eye over the numerous significations of our two positive ethical concepts will now realize where much of the adroitness and sagacity which characterizes them originates.

In these two simple facts, namely, that extensor

actions bring more of the world of action within our range, and that even the thwarted man imaginatively explores the environment to find substitute stimuli to release his energy upon, we find the reason why man has more uses for the words "right" and "good" than he has for the words "bad," "evil," and "wrong." And with this we achieve by a purely empirical and anti-supernaturalistic method a physiological warrant for ethical optimism. If anyone is looking for a "higher" truth, let him ponder this one.

CHAPTER VII

"VIRTUE" AND "VICE" AS FUNCTIONS OF THE ORGANISM

"In nearly all these philosophic discussions of ethics one has somehow the haunting sense of a wrongness of direction. Virtue is somehow imposed from above, it is descending upon us. And the unfortunate part of this is that it has to descend very low indeed before it reaches us; and when there, it has lost the buoyancy wherewith to lift us up."

EDWIN HOLT, "The Freudian Wish."

In the foregoing analysis of the five most frequently used ethical concepts we have had to feel our way rather carefully, inasmuch as a completely new path was being cut through the tangle of human experience; henceforth, however, our task will be somewhat easier, since we shall now be able to apply the truth we have already discovered in the remainder of our investigations. Directly, then, we shall proceed to ask what another pair of ethical antonyms, namely, virtue and vice, signify in terms of our physiological functions.

It will be recalled that our first five ethical concepts were rather largely employed to point out objects and relationships in the external environment. It is common to speak of *good* and *bad*

automobile tires, of the *right* golf club to use near a bunker, of the *wrong* side of a sheet of drawing paper, and of the *evil* that men do which lives after them. When, however, we take up the study, first of "virtue" and "vice," and later on, that of "conscience," "duty," and "freedom," we are no longer to be primarily concerned with things outside of the organism, but rather with processes going on within it. Significantly enough, this deepening of our absorption into the field of ethics involves a further penetration into the realm of physiology. Thus in a curious and unforeseen way our fundamental thesis with regard to the close relationship between physiology and ethics obtains additional support. Consequently, we are not to turn suddenly from objective to subjective ethics, as has usually been the case when the five concepts we are forthwith to analyse have been discussed; on the contrary, just as we began by defining ethical values in terms of human activities, so shall we continue until we have made an end. And although it is commonly asserted that the deepest meanings are *inner* meanings, yet in a universe that has neither an inside, nor an outside, nor an edge, such a figure of speech simply betokens an introversive tendency on the part of him who uses it.

Herewith, also, the need to combat another equally stultifying tendency is manifest. I refer to the proclivity of all second-rate minds to reify abstract terms. "Virtue" and "vice" have been so reified, as have likewise "conscience," "duty," and

"freedom" to such an extent as to make it almost impossible to get a fair hearing for any one who wishes to discover the sources from which these concepts have been derived. It is admitted, of course, that the evolution of man has been greatly hastened by his ability to make and use abstract terms; but when a man uses an abstract term without knowing or caring from what sources it has been derived, he is manifesting little more than a desire to escape from reality.[1] Indeed, it might be said that unless the use of abstractions assists us in dealing more effectively with concrete persons and things, it is time to regret that language has been universally acquired.

The terms "virtue" and "vice," therefore, instead of being treated as abstract entities which existed even prior to man's advent on the planet, and which will survive his leave-taking of it, will be here regarded simply as words by which a man describes the behavior of himself and of his fellows. And, as was the case five times previously, our definitions of these particular concepts will be the result of a search for the greatest common divisors of all the particular virtues and vices respectively.

Strangely enough, however, no complete catalogue of either the virtues or the vices exists. Moreover,

[1] Compare the expression, "And now abideth faith, hope, and charity" with "And now there are faithful men, hopeful men, and charitable men." Only the latter of these statements has any real meaning.

every list which the different philosophies and religions furnish reflects a different bias or determining tendency. One need only to scan the Platonic, the Aristotelian, and the Christian inventories [1] in order to verify this remark. The determining tendency thus revealed turns out upon analysis to contain two elements:—first, the desire to reduce the essential virtues to the smallest number possible, and second, the inclination to rank them from the highest, or supreme virtue, to the lowest. Such a procedure as the latter,—that of building the edifice of virtue down from the top,—is, in our estimation, no part of a scientific method in ethics. Neither does it tell us what *a* virtue is. Besides, as might be ex-

[1] Plato's list is very brief, and his virtues correspond to the three parts of the soul as he conceived it. Self-control, courage, and wisdom are the three virtues which characterize the desire, the will, and the reason respectively, while the supreme virtue is a harmony or health of the soul.

For Aristotle, virtue is found in a moderation between extremes. For example, the virtue of courage is a mean between cowardliness and rashness. Others of his virtues likewise derived are: temperance, liberality, high-mindedness, mildness, friendliness, candor, urbanity, and justice.

The Christian virtues, while never stated in systematic form, are typically represented by humility, kindliness, self-denial, meekness, patience, temperance, and, perhaps, other-worldliness.

Comparatively few ethical writers attempt to give a list or scale of virtues and vices, and some of them ignore the question completely. Martineau, in a somewhat successful attempt to free himself from an irreconcilable dualism in ethics, presents a scale of traits beginning, presumably, with vices (e. g., censoriousness, vindictiveness, suspiciousness), and ending with virtues (compassion, reverence, and veracity). In the application of this system, the chief question is, not what is bad or what is good, but simply, which trait is better and which worse than another.

pected from such biased and provincial system-making, what one philosophy or religion calls a virtue, may be classified by another as a vice. Witness the ambiguous status of *humility* as treated now by the followers of Nietzsche, and again by the early Christians. Perhaps, however, such ambiguities may be traced to the fact that the term "vice" is of uncertain etymology, while no such perplexity arises concerning the origin of the word "virtue."

This lack of unanimity or completeness in the various invoices of virtue is not in any way fatal to our purpose. In spite of special emphases philosophies and religions may exhibit or insist upon, every particular virtue is undeniably *some quality, trait, or performance which is admired or esteemed.* Taking this description as our point of departure, let us first consider what sort of traits and performances have been thus commended, after which we shall be able to discover to what an extent virtue and vice are contradictory. For it is by no means obvious at the start that they are true antonyms.

Let it be recognized, then, that the original signification of virtue refers to the so-called manly or noble qualities of bravery, valor, daring, courage, and the like. From this it is inferable that just as *might* and *right* were found to have much in common, so do virtue and physical power. Perhaps the biologist would call this phase of virtue a manifestation of positive thigmotaxis, that is, the tendency to face and fight against physical obstacles. We

might also call these manly or noble qualities the *spectacular* virtues, since he who displays them is always subject-matter for the dramatist, whether a man exhibit his valor in the midst of a crowd on Broadway, or alone in the fastnesses of the Yukon. How far this sort of virtue can be attributed to the dumb animals has not yet become part of ethical inquiry. In Plato's Dialogue "Laches" Socrates argues that the virtue that is strength, in so far as it pertains to human beings, contains an intellectual element that is wanting in the lower animals, however pluckily they may defend their young against an intruder. Nevertheless, sympathetic and careful observers of animal behavior are becoming more and more convinced that the defence which such a bird as the penguin makes against the egg-eating skua-gulls is just as courageous an act, and therewith just as virtuous, as that of a weak nation against a mighty invader. Reduced to its lowest terms, every act of bravery is the same: it is only the interests involved which make the sacrifices of Regulus and Andreas Hofer seem fundamentally different from those of dumb animals at bay before the merciless hunter. But evidences of a growing doubt on this point are manifest today in the fact of our awarding hero-medals to dogs and horses in the same manner as we award them to men.

A second class of traits which have been traditionally commended includes such things as caution, probity, temperance, sobriety, honesty, and the like.

These virtues are at once seen to lack the theatrical or spectacular quality which attaches to displays of physical courage or intrepidity. They might, therefore, perhaps be called the *unobtrusive* virtues. It is not to be understood, however, that these unobtrusive virtues require any less physical energy than do those with which they have just been contrasted. To be sure, the energy expended is on the whole less suddenly released, for it may involve far more work to acquire the habitual trait of honesty than to be gallant for an hour or so on the field of battle. Perhaps it is due to the recognition of this fact that today raw physical fortitude is not the first association which the mention of "virtue" calls up in our minds.

A third use of the term "virtue" signifies any inherent property capable of producing certain effects, in which connection it particularly refers to the medicinal efficacy of drugs distilled from plants. This sort of virtue is *good for* something, and is usually regarded as life-enhancing.

Finally, this concept appears in certain familiar phrases, such as "by virtue of," "in virtue of," and the like, where it usually connotes *strength,* or *efficacy,* or even *reason,* and *right.* Thus we see that the word "virtue," like the other ethical concepts we have analysed, loses almost all of its specificity when it enters into idiomatic phrases.

These four classes exhaust the uses to which this concept has been put. What, then, shall we de-

clare to be the common element in them which we may call the essence of virtue with respect to human beings? In giving our answer, it is necessary to call attention to the fact that our third use of the word "virtue" (signifying the medicinal efficacy of drugs) will occupy a minor, or even negligible place in our definition. As for the rest, seeing that the virtues are one and all traits which are commended or praised, they may be considered as action-patterns or action-tendencies which human beings manifest. We can also go further than this. Employing the physiological principles hitherto used in defining ethical concepts, it appears at once that the word "virtue" means that *energy is either being mobilized or expended to obtain what the organism considers to be a dependable good.* This can also be stated in another way, by saying that those human traits which have been expressly denominated virtues are some of the attributes of what is commonly called a "good" man. (See Ex. 21, p. 38.) In this restricted sense, furthermore, the *virtuous,* or *good,* man is the one whose acts are called *right.* And this leads us at once to a very important question.

Why is it, we ask, that so few of the innumerable human traits that are commended every day—not only by words of praise, but also by that subtler and more emphatic sign of unconscious imitation—have been chosen as virtues, while so many others have been left out of the list? The four cardinal

virtues,—courage, prudence, temperance, and justice,—exemplify this high degree of selectiveness, while this inventory omits all mention of human skill in any form, in spite of the fact that when the list was made by Plato, human skill in the fine arts had reached one of its limits of excellence.

The answer here sought is highly significant as a comment upon ethical speculation in a pre-scientific age. The list of cardinal virtues is merely an index of the bias of its maker with regard to the outstanding problems of his own time. These four traits which Plato elevated to the top of his system are not, then, to be taken as an indication of what Plato saw most frequently exhibited by the citizens of Athens, but, if anything, just the contrary. Anyone who has read Plato's "Republic" will recall that his aim was to describe an ideal, that is, a not-yet-existing state, and that these four virtues were lauded, not because they had been found in actual life to be either sufficient or practicable, but rather because they seemed to Plato to fit into his ideal scheme. Now it is seldom denied that courageous men, prudent men, temperate men, and just men are to be soundly commended, or do we in any sense deny it here. Our only question is, Should these four traits be called the cardinal or supreme virtues before the whole list of commendable traits has been scrutinized? The answer which the scientifically trained mind gives is in the negative. Something else, however, is even more important

for the foundation of an empirical ethics, namely, the question: Are those traits which we *openly* praise to be regarded, in the study of actual conduct, of prior importance to those which, by being unconsciously imitated, receive our silent, and therewith more significant approval? This, however, is the same as asking whether man has ever dared to face with courage and sincerity the real ethical problem.

A glance at another well-known list of selected virtues reveals even less of a tendency toward the statistical method in ethics than even Plato showed. We refer to those significantly unobtrusive virtues which characterized the ethics of primitive Christianity, and which were doubtless derived from the Beatitudes. Readers of the English Bible may recall that the epithet "blessed" was employed by Jesus to describe (1) those who were poor in spirit, (2) those who mourn, (3) the meek, (4) those who hunger and thirst after righteousness, (5) the merciful, (6) the pure in heart, (7) the peacemakers, (8) those who have been persecuted for righteousness' sake, (9) those falsely reproached, (10) the poor, and (11) those who weep, which persons, in the average, are an entirely different class of organisms from those whom Plato would have called "blessed," that is, commendable.[1]

[1] It is to be observed that Jesus was much more specific and empirical than either Plato or St. Paul, since in his treatment of this phase of the problem of conduct, Jesus often described the situation concretely, e. g., "those persecuted for righteousness' sake," rather than by employing, as did Plato and St. Paul, abstract nouns,

There is evidence to believe that this novel emphasis upon a certain type of person,—a type hitherto openly unpraised in the ethical thought of man,—gave rise to the tendency to elevate such traits as humility, kindliness, self-denial, meekness, patience, and the like, to a supreme position in the minds of primitive Christians.

However, this class of virtues is again not to be considered as indicative of the only traits which people commend, either openly, or by more subtle and significant signs. It is even safe to say that no group of Christians, be it either small or large, existing in a remote or a modern generation, were ever naïvely satisfied, or brought by dint of training, to act on the principle that these unobtrusive traits were the chief virtues. The reason for this plainly lies in the one-sidedness of such traits. Paulsen, in his "System of Ethics," points out that whereas the Greeks found positive values in (1) scientific knowledge, (2) esthetic and other pleasures, (3) temperance, (4) courage, (5) justice, (6) honor and high-mindedness, (7) bodily cultivation, (8) economic solvency, (9) family life, and (10) the state, the early Christians considered almost none of these things to be worth their while. And whereas it would be more or less insulting to the memory of Jesus to call the doctrines of the early Christians

such as "courage," "charity," and the like. But it must also not be forgotten that of all the ethical teachers of antiquity, Socrates alone consistently stuck to the concrete realities of ethics and constantly admitted the size and difficulties of the problems involved.

an extension of his teachings, yet we can say that the unobtrusive virtues which early official Christianity sought to emphasize, are one and all withdrawing reactions, and as such must be rejected as the sole basis of a scientific ethics.

We reject them because they are not based upon a sufficient consideration of the total needs of man's body,—that on which his life and mind depend. Man has not only a flexor system, but an extensor system of muscles as well, and it must be plain from the discussions in the preceding chapters that both of these systems are ethical mechanisms. However, official Christianity has often seen fit, by its exclusive emphasis upon those virtues which involve withdrawing reactions, literally to declare that the extensor system shall be denied a stimulus. The Greeks were far wiser; for even though they may have failed to achieve a conception of virtue which took into consideration the wholesome balance between flexor and extensor activities, they nevertheless did not err in propounding a doctrine that ignored the simplest principles of human behavior.

As a matter of historical record, primitive Christians did not succeed, by the exhibition of these unobtrusive virtues, in making themselves either inconspicuous or immune to their persecutors. If anything, indeed, they were all the more actively hounded because of their queer traits. And why? For the simple reason that the typical Christian virtues, being withdrawing reactions, and conse-

quently allied to and confused with the attitudes of secretiveness and dissimulation, led the Roman officials quite reasonably to suspect that the early Christians were dangerous to the state. And it can be substantiated that primitive Christianity was far from being a patriotic movement. In those days, at least, the man who did not retaliate a blow was regarded first with amazement, then with contempt, then fear, and finally with the most diabolical hatred. Such a silent man might know something very important, might have knowledge of a world-wide insurrection ready to break tonight. Tear him to pieces, then; he shall at least not maintain that exasperating smile! How is such a meek man "blessed"? It may be true that our sentiments can partially apologize for a system of ethics based upon the functions of the flexor system alone, yet the sense of proportion which we inherit from the Greeks demands that we strike out on new paths which are not littered with the blunders of the past.

We must not forget to say, however, that one reason why these unobtrusive virtues have been given a chief place, not only in official Christianity, but also in Mohammedanism and Buddhism, is because of the simple, even though disquieting, fact that the flexor system is by nature stronger than the extensor system. Man, then, is by endowment more inclined to be humble and secretive than to be bold and frank, since the larger and stronger and more often activated muscles of his body are those

which produce withdrawing reactions. That is also why man is prone to introspection, and to cultivate an inner life, and why also, to borrow a phrase of Dr. Morton Prince, he is frequently more interested in his own "mental mud-puddle" than in the external environment. Again, this physiological fact is responsible for each man having his own house, his nest, into which he retreats to escape from the novelties he can no longer adjust to, and where he may "bathe his receptors in comfort-giving stimuli." And so, one is finally tempted to say that the unobtrusive virtues have obtained such a vogue because they are the only ones which over sixty per cent of mankind can appreciate and will ever really attempt to achieve. Perhaps, also, it is for the same reason that today the word "virtue" signifies almost exclusively *chastity,* a trait of character and an action-pattern which any physician will tell you is dependent for its existence and maintenance upon the contractions of very powerful flexor muscles.

The upshot of all this discussion is that from the study of man's body as an ethical machine, it appears that he who would formulate a list of the chiefly desirable traits or virtues should first carefully consider the total needs of the organism. This new catalogue of virtues will be based upon the realization that man possesses both a flexor and an extensor mechanism. We know already that many ailments of the body are traceable to a lop-sided use of it,

by which is usually meant the acquisition of chronic fatigue-postures in the flexor muscles. Indeed, chronic postures are recognized to be of such paramount importance, that experts have been employed to devise adequate stretching exercises (actuating the disused extensor system) in order to restore the organic balance of a nation. Moreover, just as the hygiene of the body depends upon a liberal use of all of its muscles, so likewise the ethical balance of the organism can be maintained only by the cultivation and commendation of a sufficient variety of traits to provide an outlet for all the action-tendencies which man naturally possesses. Virtue, then, we may henceforth regard as being based directly upon our physiological needs, and not upon the assumption, so frequently employed in the past, that ideals must be unattainable in order to be respectable.

Moreover, a strictly natural science of ethics will have a regard for the fact of individual differences among men, and, recognizing that blood-pressure, metabolism, talents, and capacities differ so widely as to make it impossible for any one trait to be the "highest" virtue for all persons, it will place the emphasis solely upon the needs of the individual case. Already this development has become widespread. The juvenile courts, the Society for Mental Hygiene, the National Child Welfare Association are all examples of an ethical technique based entirely upon the sciences of physiology, psychology,

and medicine. This emancipation of ethics from official religion is one of the most momentous events in the history of civilization.

And finally, we may say that it is time to recognize that since each one of the "seven ages of man" has its own particular mental and physical characteristics, so likewise does each of these ages have its own particular virtues. Too long have parents whispered themselves into the belief that the child ought to strive to copy the man, for the result of this unconscious egotism has only forced such parents to discover that when their child has grown up, they immediately wanted him to be an infant again! But it is becoming recognized among those who learn to look at the world without such an exaggerated self-preference, that every phase of life,—infancy, puberty, youth, manhood, middle-age, maturity, and senescence,—brings with it ever new ethical opportunities in the appearance of traits peculiar to each phase, and that it is in the development of these various potentialities into their own natural end-product that the ultimate ethical values consist.

Is Vice the Opposite of Virtue?

It now remains to be seen what the word "vice" means, first by scanning the uses to which it is popularly put, and second, by reference to its physiological implications. Accordingly, then, we find

the following general classes of things called vices.

Any fault, mistake, or error may be called a vice, as, for instance, a "vice of method." This signification is practically identical with one use of the term "bad." (E. g., bad workmanship, defective, below par; sometimes called poor or worthless.)

Likewise, any imperfection, defect, or blemish falls under this category, as "a vice of conformation," "a vice of literary style." Here again this use of the concept may be identified with some of the significations of "bad" and "wrong." These first two classes of vice may be related to one another in the sense that the first is the cause, and the latter the effect,—the erroneous (vicious) method producing the blemish (vice) in the product.

In our third class are found the significations most commonly implied by this concept today, namely, those habits or actions contrary to public policy, and especially those which arouse violent censure. Such are gluttony, indolence, mendacity, drunkenness, debauchery, and the like, which might also be included in any complete list of the things which are called "bad," "evil," and "wrong." The peculiarly specific element which enters here, however, is the damage to the organism which these vices entail. Sometimes, also, this concept is used in the expression, "an age of vice," a phrase which denotes a period of time in which these censured practices are extremely prevalent, or given particular notice.

The term "vice" is also used in describing animals

not thoroughly trained, as when it is said: "That bird-dog has the vice of mouthing the quarry," or "I must break this horse of his vice of cribbing."

Formerly, indeed, some inherited bodily defects were spoken of as "constitutional vices," but this use of the term is now rare.

It can be seen at once that while virtue and vice are popularly regarded as opposites, no amount of stretching applied to either of these concepts will make it the true antonym of the other. It is idle for anyone to remark that they *ought* nevertheless to be regarded as diametrically opposed; empirically they are not, as the following analytical table plainly shows:—

VIRTUES	VICES
Valor, courage, intrepidity, (strength). The spectacular virtues.	No antonym, except in the rare cases where cowardice may be regarded as vicious.
Caution, probity, temperance, sobriety (and the unobtrusive Christian virtues).	Negated by mendacity, drunkenness, and debauchery, but not precisely; nor popularly by gluttony and indolence.
Medicinal efficacy of drugs.	No antonym.
The phrases, "by virtue of," "in virtue of," etc.	No antonym.
No antonym.	Fault, mistake, error.

VIRTUES	VICES
No antonym.	Imperfection, defect, or blemish.
No antonym.	The faults of untrained animals.
No antonym.	Constitutional vices

How, now, shall we proceed to construct our definition of the ethical concept "vice"? It will be recalled that we used the term virtue to describe a situation in which energy was being either mobilized or expended to obtain what the organism considered to be a dependable good. Does vice imply the opposite of this? Hardly, for it must be admitted by the uncensorious observer that many of even the most violently condemned actions could be described as part of somebody's program to attain a durable satisfaction. The glutton, remembering once more how comfortable a full belly makes him feel, may gorge himself without stint; and even if he has been warned that diabetes and gout are likely to be the final results of such persistent devotion to the pastry and the roast, he may still pursue these foods with avidity, cheerfully and hopefully making himself an exception to the general rule of impending disaster. In the same way, the lusty pursuer of sex enjoyments may be dispassionately regarded as planning and achieving his own type of satisfaction, and while he may often "in a cool hour" be aware of the likelihood of entangling alliances, yet even his self-

censure is not guaranteed to keep him from mobilizing his energy for the attainment of his chosen, private "good."

Once more, then, we realize that "virtue" and "vice" are not true antonyms. We saw this to be the case with "good" and "bad," and likewise with "right" and "wrong." It is only when these pairs of terms are used with the most severely restricted denotation, that is, with a provincial bias, that their opposition and contradiction appears. Such bias is also shown, when it is said that the glutton and the debauché "really know that they shouldn't" indulge themselves as they do, a statement which signifies something like this: If these men who do what I call "wrong" were only to act as I direct, they would not be censured. Obviously so, but what a host of fallible assumptions this involves! It is merely ignoring the problem, and such a treatment furnishes no hint as to its solution. One begins to doubt the validity of all praise and blame as profitable ethical instruments. Besides, the appeal to self-censure, as employed in the above case, is, in the end, relatively inefficacious in actual practice, and is hence illogical as a basic principle in ethical theory. Indeed, it is idle to say that we all know what we should do; if we had that much information, we would act upon it, for the will and the intellect, as Spinoza remarked, are one and the same. The great need in ethics is to get right down to the empirical facts of conduct and to let them teach us,

rather than to hide the facts behind a screen of pious insincerity. Importunate chiding may be a traditional tool of morality, but it does not contribute anything to the establishment of an ethical science.

Consequently we shall have to reject any definition of the vices which goes no further than to describe them as those actions which some observer regards as unprofitable. It may be that such a definition superficially fits a great many cases, but great danger lies in accepting it without scrutiny, since it tends to imply that ethics is merely a study of *opinions* about conduct, and not of conduct itself. Now, no other science is a study of opinions, not even the normative sciences of bridge-building or landscape gardening; and ethics is no exception to this general rule. Moreover, since we do not know of any absolutely wise observer to whose opinion we can appeal in every doubtful case, a true definition of vice has not yet been achieved.

However, if we bear in mind that praise and blame, or commendation and censure are always relative to certain environmental conditions, and if, furthermore, we can discover what they really imply, we shall doubtless be able to arrive at a conception of virtue and vice that will square with the observable facts of human conduct. And the first point to be emphasized is that whenever these concepts are used, some standard seems to be implied. What is this seemingly hidden standard, this presupposed

line, which, especially in the case of the vices, one is forbidden to cross under pain of censure? Sometimes it seems to be a line drawn within a family, sometimes within a neighborhood, while often it is confined to a class or profession, and again it is delimited by a national culture. Would it not seem that every such tacitly assumed standard is created by the relatively unconscious judgment of the group in the very effort to have a group, the members of which recognize each other as belonging to it? In other words, are not all such standards a function of the desire of the group to employ the pronouns "we" and "us" significantly? This is not oversimplifying the matter, since the use of such pronouns implies much more than is commonly realized. Indeed, when man says "we" instead of "I," he indicates that a point in evolution has been reached where a similarity of predicaments has produced a similarity of aims. To fight a common foe, to till a common land, and to keep a common eye upon strangers are one and all actions implicit in the establishment of group standards. And even though these standards are often ill-defined, and frequently neglected by certain individuals within the group, nevertheless they remain as a background of reference (in strict mechanistic terms, as an old habit-posture), whenever there is any danger felt lest the word "we" should become meaningless. Danger felt by whom? Particularly, we are obliged to say, by the most conservative members of the group,

for be it remembered that praise and blame, and reward and punishment are insisted upon most violently by undiscriminating persons. Such persons, it seems, are most sensitive to the waxing and waning of certain benefits which others have achieved for them, and which they regard as valuable to retain and dangerous to lose.

If anyone wishes to know what such benefits are he has only to recall what traits his own group calls virtues and vices, and to ask in every case just what they imply in terms of the needs of the group which sanctions or condemns them. For example, valor, courage, and intrepidity, together with the other spectacular virtues, have certainly been commended because they supply two very obvious and well-nigh universal group needs. The first is a common, stalwart defence, and the second is a healthy progeny. Cripples and deformed persons have never been objects of admiration or praise. As for the unobtrusive virtues, many of these have likewise been commended by such a group as feels itself beset or insecure on account of its inability to compete with the strong on their own terms, and this group has adopted them in a semi-parodoxical attempt to acquire solidarity. To turn at once to the other side of the picture, we find that the vices of gluttony, drunkenness, and lechery have been condemned not only because they effeminate and debilitate, and thereby undermine the defence-power of the group, but also because they tend to reduce the capacity of

the group to create a sound and fertile offspring. This is doubtless why certain congenital abnormalities were formerly spoken of as "constitutional vices." As for the word "vice" being sometimes applied to botchy work, incorrect methods, and the faults of untrained animals, we can see how in special instances a group might regard these things as peculiarly detrimental to its solidarity. Contrariwise, the "virtue" of a medicinal plant might, under the harassing circumstances of a plague or an epidemic, be the chief cause of even a nation's concern.

In thus defining virtue and vice in terms of the assets and liabilities of the group, what becomes of our previous attempt to define virtue in individualistic terms? The answer is that this previous conception remains as a necessary complement to, and check upon, group intolerance. For while the desires of the group and those of the individual may sometimes clash, they do not need to be considered as basically or essentially opposed to one another. The historical fact is often manifest that when group solidarity tends to produce mediocrity, there is a sudden overt demonstration of individualism. Our own generation shows an example of this type of reaction. When, again, extreme individualism fails to yield group assets, the conservative tendencies begin to reassert themselves more powerfully once more. Yet it is doubtful whether exactly the same type of conservatism is ever repeated,

since the individualism which it seeks to counteract is, in succeeding generations, different from the type which preceded it.

Is Virtue Its Own Reward?

From the foregoing it is apparent that the ethical concept "virtue" has two alternative interpretations. One of these involves the commendation of the group on the basis of what its members feel to be required for the maintenance of its traditions. The other interpretation is based upon what the individual mobilizes and expends his energy to obtain. Which of these is superior to the other, that is, which would survive in case of mutual conflict, only the last volume of recorded history will relate. What is more of a real problem to us is the question, commonly asked, Is virtue its own reward?

This curious question involves the philosophical theory of internal relations,—a theory of very doubtful validity. The statement that virtue is its own reward is equivalent to the assertion that virtue is valuable in and for itself. But if so, then virtue is unique, and this again is doubtful, for whether we observe the individual devoting his energies to the attainment of some dependable good, or the group commending him for it, it appears at once that virtuous actions are never undertaken without some hope of reward either in the shape of praise or of tangible results. Upon hearing this, some

will groan, claiming that a good man should act ever and only on principle, and leave the rest to the gods. And yet nobody ever did so. Moreover, it is plain that the truly virtuous man, whether acting within the taboos of his clan, or striking out on entirely new paths after a "good" that he could depend securely upon, received a three-fold reward of a very substantial nature. He achieved power, he attained wisdom, and he secured peace; and these rewards, moreover, in the degree to which they were gained, automatically thereafter became the measure by which the dependability of any good could be estimated. And we also venture to say that the same criterion could be employed in determining to what extent any particular trait of character was a vice.

Even more than this, however, can now be said. For such a criterion as is here suggested has significant implications for the human body,—that upon which life and mind ultimately depend. Experiments in psychology and psychiatry have revealed that traits of character are more than skin-deep and brain-deep; indeed, they are more than muscle-deep: they are as deep as the vital organs themselves. Even more than this is apparent, for these same sciences have demonstrated that not only is such a trait as anxiety just another name for a chronic muscular tension, but also that many diseases are, if not caused, at least abetted by what we think, how we act, and what feelings we cultivate. In

more precise terms, the mechanisms of thought and action, being partly identical with the mechanisms of locomotion and metabolism, can produce either a hygienic or an unhygienic effect upon the whole structure of man's organism. And in this fact, I think, we can find an acceptable basis, even if a new one, for the distinction between virtue and vice.

This basis we propose is not altogether a novelty to keen students of human nature. We know that the normal, healthy and successfully adapted human individual is characterized by a relaxed and resilient condition, not only of his superficial or locomotor muscles, but also of the muscles of his alimentary tract. Both his voluntary and involuntary systems are constantly in a state of readiness to perform their necessary functions, and they also return to this condition after any series of actions has been performed. Such a man possesses aplomb, and is an example of the healthy Greek ideal of a sane mind in a sound body. In striking contrast to such a normal, resilient state, there are frequently found two other organic conditions which are readily delineated. The one is called muscular flabbiness, characterized by a powerless or a-tonic state of the muscles of either the voluntary (or teachable) and the involuntary (or unteachable) systems, or both. A man in this a-tonic plight is incapable of vigorous, coordinate action, and his muscles do not manifest a normal readiness to respond to successive stimulations. The other abnormal condition, at the oppo-

site pole from this one, is the one involving chronic muscular tensions, a condition which may be compared to the state of a steel spring which is always kept under severe strain, and which is never released far enough to give the metal a chance to recover from the stresses it undergoes. Highstrung, overanxious, jealous, irascible people illustrate this type of organism with exactness.

The ethical implications of the foregoing must have already been guessed. Is it not possible to define the virtuous man as the relaxed, resilient, coordinate individual, and the vicious man as either the muscularly flabby, and therewith the lazy, spineless, procrastinating, lecherous man; or else as the abnormally hypertonic organism, whose muscles constantly pay dividends of wrath, and whose grudges and malice are carried even through his slumber? If so, there should be no paradox implied in speaking of virtue and vice as functions of the human organism.

CHAPTER VIII

IS CONSCIENCE ALWAYS A PATHOLOGICAL PHENOMENON?

"When the rookery is pretty well filled, and the nest-building is in full swing, the birds have a busy and anxious time. To get enough of suitable small stones is a matter of difficulty, and may involve long journeys for each single stone. The temptation is too strong for some of them, and they become habitual thieves. The majority remain stupidly honest. Amusing complications result. The bearing of the thief clearly shows that he knows he is doing wrong. He has a conscience, at least a human conscience, i. e., the fear of being found out. Very different is the furtive look of the thief, long after he is out of danger of pursuit, from the expression of the honest penguin coming home with a hard-earned stone.

"An honest one was bringing stones from a long distance. Each stone was removed by a thief as soon as the owner's back was turned. The honest one looked greatly troubled as he found that his heap didn't grow, but he seemed incapable of suspecting the cause.

"A thief, sitting on his own nest, was stealing from an adjacent nest, whose honest owner was also at home, but looking unsuspectingly in another direction. Casually he turned his head and caught the thief in the act. The thief dropped the stone and pretended to be busy picking up an infinitesimal crumb from the neutral ground."

"The Heart of the Antarctic," SIR ERNEST SHACKLETON, Vol. II, p. 253 (Section on the Adelie Penguin, by James Murray, Biologist of the Expedition).

The word "conscience" was perhaps originally synonymous with consciousness, but it gradually came to mean *self*-consciousness of a very special type, namely, the silent commendation or censure which a man may bestow upon his actions or his projects. This word "conscience" replaced the Middle English term *inwit*,—a term made famous in the title of a book (circa 1340) called the "Ayenbite of Inwit" (that is, the "Again-bite or Remorse of Conscience"). The concept of conscience has played an important part in modern ethical theory, and it is supposed by many persons to be the foundation of all morality. What place it deserves to hold in a constructive, mechanistic ethics can be determined, however, only by careful analysis. So many extravagant claims have been advanced in its behalf as to make one suspect that none of them are true. Things which people have "always heard lauded and never discussed" are only with difficulty saved from oblivion when intellectual revolutions have altered the emphasis which man puts on the values of life. It was thus with the word "soul," and with the word "immortality," and it is likely to be the same with the word "conscience." At least it will be an advantage to look at the philosophical pedigree of this once mighty shibboleth.

It may be surprising to learn that as far as ethical theory is concerned, the doctrine of an infallible conscience is the product of no less recent a time than the XVIII century. The Conscience-theory is the philosophical property of such men as Butler, Clarke, Kant, Shaftesbury, and Reid, rather than of their predecessors. Thomas Hobbes (1588–1679), who founded critical English ethics, flatly refused to give to the then immature concept of conscience any recognition; indeed, he declared it to be nothing less than a "disease" of the state, and one "of those things that weaken or tend to the dissolution of a commonwealth." In Chapter XXIX of the "Leviathan," he states the current notions of conscience: (1) "That every private man is judge of good and evil actions," and (2) "That whatsoever a man does against his conscience is sin." Both of these notions Hobbes condemns. "For," he observes with characteristic sagacity, "a man's conscience and his judgment is the same thing, and as the judgment so also the conscience may be erroneous."

This emphasis which Hobbes placed upon the untrustworthiness of private ethical judgments was fatal to his purpose. His successors began straightway to reanimate that which he had sought to bury once and for all, and, whether on account of their temperamental antipathy to the intellectualism of Hobbes, or because they were honestly seeking for some valid ethical principle, they asserted, first timidly, and later with a surprising boldness the very

thing which Hobbes had sought especially to efface from the docket of ethical discussion.

We find this reaction beginning in Shaftesbury (1671–1713). Albeit this author gives a minor place in his ethical theory to the notion of a "moral sense," or rational, reflex affection which approves only socially beneficial actions, yet the positive emphasis which he puts upon it is nevertheless significant. The affirmation proved to be contagious, for those who followed Shaftesbury immediately elevated conscience to a central position in their systems. We refer here to Butler, Clarke, Kant, and Reid, who are known as intuitionists.

According to Butler (1692–1752), conscience is a "principle of reflection" and not a mere *feeling*. And this principle of reflection is for him a natural or inherent property of man's mind. It is the principle by which a man "approves or disapproves his heart, temper, and actions"; it is a faculty which "tends to restrain men from doing mischief to each other, and leads them to do good." Be it noted here that Butler says nothing about the so-called infallibility of conscience, nor does he argue that it must be the same for all persons. Moreover, he gives a somewhat analytical definition of it, and is willing to grant that its function is utilitarian.

The old belief in the certainty of conscience now begins to reappear. It was Clarke (1675–1729) who attempted to defend it by the use of a mathematical analogy. We are all familiar with the

axiom (or truism) that things which are equal to the same thing are equal to each other. If now we keep the general form, but alter the substance of this axiom, so that it reads: "Whatever I judge reasonable or unreasonable for another to do for me, that by the same judgment I declare reasonable or unreasonable that I in the like case should do for him," we have Clarke's Law of Equity. To an arm-chair philosopher such a statement sounds fairly cogent, but its empirical value is not thereby guaranteed. As every student of psychology knows, individual differences, individual preferences, and the capacity of individuals by this method of give-and-take are completely ignored in the formulation of this law. Besides, Clarke's conception of conscience may be said to contain a hint of ethical solipsism, or the theory that oneself is the only accurate authority on social justice. We need not pause longer over the insuperable difficulties of such a point of view.

It is, however, in the writings of Kant and Reid that the conscience-theory attains its modern, sentimental form. In his "Metaphysic of Morality" Kant (1724–1804) makes the following straddling assertion: "Nothing in the whole world, or even outside of the world [sic!] can possibly be regarded as good without limitation except a *good will.*" But this is not the full extent to which this philosopher presses his claims. For he continues, "A man's will is good, not because the consequences which flow

from it are good, nor because it is capable of attaining the ends which it seeks, but it is *good in itself,* or because it wills the good. Its intrinsic value is in no way increased by success or lessened by failure." From all of which Kant concludes that "As the will must not be moved to act from any desire for the results expected to follow from obedience to a certain law, the only principle of the will which remains is that of the conformity of actions to universal law. In all cases I must act in such a way that I can at the same time will that my maxim should become a universal law." This last statement is the famous categorical imperative.

At first glance this appears to have profundity, but it turns out even upon the slightest analysis to be quite the opposite. For example, the first passage quoted ("Nothing . . . can be regarded as good without limitation except a good will") contains assertions that nobody can know enough to make. It is ritualistic philosophy. Moreover, the expression "good will" actually does (Kant to the contrary, notwithstanding) put a logical limitation upon the concept *good,* just as "good" cat, or "good" razor does. Besides, the term "will" or volition always refers to a phenomenon which is strictly dependent upon circumstances, for a man wills *only when* there is something to be possessed. These are not all the errors which Kant here commits. His attempt to explain why the good will is good (itself a statement exhibiting the fallacy of ambi-

guity) reveals that Kant was a very poorly equipped psychologist. I ask you, how many persons is it possible to find,—indeed, is it possible to find one single man except among the psychopathic cases,—who would ever be stimulated to live,—much less to subscribe to Kant's theory,—if his successes or failures had no effect whatever upon his future volitions? We do not imply by this rhetorical question that every man is, or can be, or should be immoderately egoistical, but only that Kant had no insight whatever into the psychological problems involved in ethics.

Consequently, the categorical imperative as a deduction from Kant's first principles is to be regarded as completely erroneous. How, indeed, can a man act in such a way as to make the maxim of his action a universal law? Suppose we offer a simple example. When I am hungry, and food is before me, I eat it. Does this imply that my will to eat becomes a universal law, namely, that all the hungry should eat? But when I learn of the many hungry who are unable to eat, my will to eat illustrates not a universal law, but an extremely particular law, that is to say, the law that *if* I am hungry, and *if* food is supplied, and, furthermore, *if* I am willing to risk that food, then, but only then, do I eat it. There seems to be no way to establish the validity of Kant's imperative, regardless of the direction one's thought takes. To cite a different example entirely, let us imagine a hungry man who, having cornered

all the food of his tribe, eats it on the assumption that every other man would do the same thing if he were similarly fortunate. Here the categorical imperative appears in such a light as to shock its author profoundly. And yet in strict logic, this interpretation is a valid one for an intuitionist ethics. Do we wonder that Levy-Brühl speaks of "the ambiguous and bastard concept of the moral law," when they who attempt to state such a law have neither comprehension nor patience enough to discover the simplest principles of human conduct?

It is, however, in the "Essays on the Active Powers of Man," by Thomas Reid (1710–1796) that the commonplace notion of conscience receives its principal philosophical support. Concerning this "moral sense," as Reid calls it in reminiscence of Shaftesbury, the following formidable assertions are made. In the first place, "It is without doubt far superior to every other power of the mind." In the second place, "The testimony of this moral sense," like that of the rest of the senses, "is the testimony of nature, and we have the same reason to rely upon it." In addition, just as the sense of vision is fundamental for space perception, so "The truths immediately testified by our moral faculty are the first principles of all moral reasoning." Reid would also have us note that this reasoning is not inductive, but deductive, for he says, "The first principles of morals are the *immediate* dictates of the moral faculty."

The outstanding fault of such a theory is that it assumes that every name we choose to manufacture has a reality corresponding to it. This is the fallacy of hypostatization, to which all idealistic philosophers are addicted. Granted that it is true, as Butler says, that we approve and disapprove of some of our actions, yet this does not imply that there is a transcendent faculty within us which we are at liberty to substantialize as Conscience or a Moral Sense. Such language is merely noun-worship. It is granted that the words "moral" and "sense" have each separately a meaning, but it does not follow that the compound term "moral-sense" must therefore have one. Moreover, all of these intuitionists are wilful and unperspicuous rationalists, demanding a fundamental principle in ethics *before* they have employed any induction or experimentation that might help them to frame such a principle correctly. They are willing to do no hard work, and to perform no crucial tests in order to see whether their guesses are facts or fictions. To complete our criticism, we must not omit to state that Reid's elevation of conscience to a place among the senses merely reveals the extent to which he was willing to go in his defence of the testimony of the senses in general against the idealists of his age. His use of the "moral sense" was a debater's trick. The high esteem in which conscience was held by his antagonists tempted him to turn one of their own weapons against them.

We can now better understand the statement previously made that the personification of conscience was the peculiar artifice, the "useful dodge," of a certain school of ethical thinkers in the XVIII century. Consequently it is erroneous to suppose that the commonplace view of this phenomenon has always held undisputed sway over theoretical ethics. It had no place whatever in the minds of Greek ethical writers. Plato, Socrates, Aristotle, and their contemporaries founded the science of ethics without even dreaming that there was a conscience. Epictetus, Epicurus, and Marcus Aurelius showed no poverty of constructive thought for the lack of it. Even Helvetius, a contemporary of the intuitionists, rejected it as spurious when he wrote: "He who will warrant his virtue in every situation is either an impostor or a fool; characters equally to be mistrusted."

Most people who have heard the name of John Locke will recall his arguments against the assumptions of the moral intuitionists in those passages where he combats the theory of innate moral ideas. According to Locke, all such ideas would have to be (1) independent of geographical location and climate, (2) independent of the age of the person and of his training, and (3) recognized by all persons as fundamental. But none of these conditions are found to be satisfied by anyone who makes the shortest pilgrimage through the world in the search for these statistics. And consequently the intellec-

tually honest Locke rejects the philosophical theory of conscience, independently of his recognition of the facts of self-approval and self-disapproval.

It remained, however, for John Stuart Mill to foreshadow the beginning of the end of this fantastic theory of the moral faculty in Chapter III of his "Utilitarianism." He writes:—

"The internal sanction of duty, whatever our standard of duty may be, is one and the same—a feeling in our own mind; a pain, more or less intense, attendant on violation of duty, which in properly cultivated moral natures rises, in more serious cases, into shrinking from it as an impossibility. This feeling . . . is the essence of Conscience; though in that complex phenomenon as it actually exists, the simple fact is in general all encrusted over with collateral associations, derived from sympathy, from love, and still more from fear; from all the forms of religious feeling; from the recollections of childhood and of all our past life; from self-esteem, desire of the esteem of others, and occasionally even self-abasement."

This analysis of Mill's reveals that what the intuitionists loosely termed *conscience* is a far more complex phenomenon than they had suspected, and with this revelation the whole logical structure of intuitionism breaks down. For if conscience is not the simple, innate, infallible principle or faculty which the intuitionists postulated it to be, the deductions they made from this hypothesis become more and more untenable the longer they are scrutinized.

Mill's analysis of the psychological factors in conscience, together with Locke's discovery of the cultural and geographical limitations of any moral sense make it necessary to define this ethical phenomenon in purely empirical terms.

Such a definition as we seek, however, could only be obtained by securing an elaborate census of cases in which the words "conscience" or "moral sense" were used. The census-taker would have to roam over the whole earth, ask questions all day long, and even become an eavesdropper at night, in order to gain the information he desired. Even this method would hardly be exhaustive, since perhaps far more "pangs of conscience" are felt than are ever expressed in language; and so our census-taker, were he as thorough as we might desire him to be, would have to be equipped with a sort of ultra-stethoscope,—one that could elevate a blush into an audible phenomenon,—in order to return with a full and complete report. The lack of such exhaustive statistics must, of course, be permanent; not only for want of census-takers, and for want of accuracy and sincerity on the part of those giving their introspection, but also because the concept of conscience may be slowly evolving, so that the end of the census might not harmonize with its beginning.

Granting, indeed, that such an evolution exists, it does not now appear to be either uniform or universal. For while, as we have recently shown, the concept of conscience first attained a philosophic im-

portance in the XVIII century, and was thereafter variously modified and developed, yet the popular notion of a moral sense,—of "this deity within my bosom," as some have even expressed it,—has actually degenerated into something unworthy of a place among the positive ethical values. Our quotation from James Murray's account of the behavior of the Adelie penguin is extremely pertinent here. *"The fear of being found out"* is, we venture to say, the very nucleus and core of the consciences of the majority of men. And while without doubt some forms of fear are well-grounded, as, for example, the farmer's fear lest the oncoming storm wash out his seedlings, yet when fear tends to limit prudence, or take the place of prevision, the organism in which that fear arises is sub-normal and unsound. Conscience, then, in so far as it is identical with this degrading emotion of fear, and in so far as it begins and ends in a withdrawing reaction, is nothing but a blight.

Yet something more remains to be said about the popular conception of the word "conscience." This word, as commonly used, denotes an emotional state which, far from being in harmony with the ideals of the group, often denotes the very opposite condition. It is hardly necessary to remark that the fear of being found out does not imply loyalty to the group any more than it implies the recognition of that which makes for power, wisdom, and peace in the individual. Indeed, conscience as popularly ex-

perienced, involving as it does anxiety, trepidation, self-abasement, and a host of other introversive tendencies, is an ethical liability, both to the group and to the individual. The man who has transgressed the will of the group is surely not a bit better off because of his fear of being caught, nor can he regard his fear, even though he has already been tortured by it, as giving him any right to a mitigation of the penalty. As for himself, the conscience-stricken individual may have so long squandered his energy in his effort to conceal his offence as to bring him very close to ethical bankruptcy. The picture we draw is not extreme,—it can be duplicated in every neighborhood, if not in every family on the globe. For conscience, as it is usually experienced, is a painful, withdrawing reaction, implying negation rather than affirmation, incoordination rather than skilful prevision, and morbidity instead of frank, overt, constructive action. Accurate indeed is the phrase, "The pangs of conscience," as a description of the organic turmoil incident to this condition of mal-adjustment. Can it not, then, be truthfully said, that in the cases just described conscience is a pathological phenomenon?

Thus to discover that the popular form of conscience implies a vice rather than a virtue is not, however, enough. We wish also to know how and why this form of conscience has attained so great a vogue. And here again we touch upon matters of

the greatest importance for a mechanistic ethics.

Conscience as a form of fear is so strong and so wide-spread for two reasons. The first is already familiar to us, and is briefly repeated. It is that the flexor system is originally stronger than the extensor system. And so in the great majority of men whose natures are less evolved, fear is almost a daily experience,—not only the fear of nature and of the unknown, but also the fear of the group by whose tolerance they exist. Moreover, sentiment and not knowledge is the great group asset, by which we imply no such educated sentiments as are derived from analytical inquiry, or from an open search after the facts, but rather that kind of sentiment which passively bars and actively hinders the enlargement of the understanding. The group really never explains. When offended, it simply becomes suspicious, and its gossips freely translate this suspicion into rumor and inuendo. It is small wonder, then, that the conscience-stricken individual, as a product of his group, has as his first, and sometimes his only reaction, the tendency to shrink and become unresilient when he realizes that his acts, or worse still, his thoughts, have transgressed the taboos of his tribe. It is a case of like master, like man; the group does not usually know what its purposes are, much less does it ask to have those purposes examined and revealed; and so the conscience-stricken individual,—the sentimental child of the

group,—reacts to his realization of estrangement from the group in a manner that makes his last state worse than his first.

This cannot be taken to imply that it is a sign of intellectual maturity to transgress all the taboos of the group. Yet the argument still holds that the influences produced by the exclusive use of this negative form of conscience are baleful. Very early in the life of the average child the expressions: "Don't," "If you dare to do that again, I'll whip you," "What would people say?" and a score of other negations are employed by his parents and teachers on the principle that ethical guidance is achieved by such means. As a result, says Edwin Holt, "The parent has set a barrier between the child and a portion of reality; and forever after the child will be in some measure impeded in its dealings" with those things which have become taboo, always first feeling the prohibition, rather than the urgency to act discriminatively upon a knowledge which a close contact with the reality should produce. Such a parent has not "trusted the truth," and the final result is that the child has actually become "a second-rate mind, not in harmony with itself," since not in creative touch with the environment.

Even more pointedly John Dewey writes in his criticism of the doctrine of self-denial. "Morals is a matter of direction, not of suppression. The urgency of desires cannot be got rid of; nature cannot be expelled. If the need of happiness, of satisfac-

tion of capacity, is checked in one direction, it will manifest itself in another. If the direction which is checked is an unconscious and wholesome one, the one which is taken will be likely to be morbid and perverse. The one who is conscious of continually denying himself cannot rid himself of the idea that it ought to be 'made up' to him; that a compensating happiness is due him for what he has sacrificed, somewhat increased, if anything, on account of the unnatural virtue he has displayed. To be self-sacrificing is to 'lay up' merit, and this achievement must surely be rewarded with happiness—if not now, then later. Those who habitually live on the basis of conscious self-denial are likely to be exorbitant in the demands which they make on some one near them, some member of their family or some friend; likely to blame others if their own 'virtue' does not secure for itself an exacting attention which reduces others to the plane of servility. Often the doctrine of self-sacrifice leads to an inverted hedonism; we are to be good—that is, forego pleasure—now, that we may have a greater measure of enjoyment in some future paradise of bliss. Or, the individual who has taken vows of renunciation is entitled by that very fact to represent spiritual authority on earth and to lord it over others."

They who wish even a more striking picture of the extent to which the negative type of conscience degrades the intellect, have only to consult Alfred Adler's "The Neurotic Constitution." If Dr.

Adler correctly depicts the salient traits of the neurotic, many intuitionists themselves are by implication introverts, and consequently forfeit their claims to ethical leadership. The neurotic is described as "a person possessing anxiety," "the self-sacrificing virtue," "a marked sensitiveness," "an irritable debility," "an estrangement from reality," as well as "a person with a strong tendency to symbolization," and a penchant for "guiding fictions" invented for the purpose of compensating him for his feeling of inferiority at having lost solid contacts with reality. This, then, is the success which the conscience-theory has met with at the hands of scientific experts,—keen and sympathetic observers of the ways of men.

Such an account of the degeneration of conscience into a self-annihilating sentiment is, however, only one chapter in the history of this concept. And while the list of uses to which the word "conscience" has been put does not furnish as solid a basis upon which to build a constructive ethical technique as did the uses of "good," "right," and "virtue," we can nevertheless still find a positive ethical value for this term. How, then, will this value be discovered?

It will be found by a study of those persons who have attained the power to view the world in a purely objective and empirical manner; of those persons who treat their own and other peoples' actions as experiments in the great laboratory of time, rather than as timid ventures to be apologized for on the slightest provocation; of those persons who have

evolved to that point where their knowledge determines their sentiments, and not their sentiments their knowledge; and of those who, having by this means chosen their dependable goods, learn the right methods to attain them, and thereafter employ plain judgments of fact in estimating the success which they acquire and the quality of the virtue which they achieve. In such persons the positive, constructive, liberalizing type of conscience exists, —a conscience which, through being built up of objectively tested judgments, becomes the outstanding ethical asset of the personality.

This type of conscience is not a myth, for it may be acquired in the same way as any other skill is acquired. The objective knowledge which it presupposes can be gained where every natural curiosity of a child or an adult is developed into a frank acquaintance with the object of curiosity; where fear is turned into intrepidity by a bold analysis of its cause and by a frontal attack upon the exciting stimulus; where one learns that ethical problems are always solved by forming serviceable habits and never by the cultivation of permanent anxieties; and where, finally, all the entangling alliances forced upon one by unprofitable acquaintances are boldly, but politely, annihilated. Even though many strongly entrenched traditions and institutions of the world would decay were the type of conscience we here describe to become wide-spread, yet this cannot deter the wise man from making it his life work to

add as many new names to the list of those possessing ethical insight as it is within his power to do. Indeed, whenever this list becomes so large as to be generally regarded by autocrats as dangerous, we shall have come to that place in the course of civilization where the first real ethical advance is to be made.

CHAPTER IX

THE MITIGATION OF THE CONFLICT BETWEEN FREEDOM AND OBLIGATION

"There is a phrase 'liberty of conscience' which well expresses the modern conception of moral obligation. It recognizes that duty in the last analysis is imposed upon the individual neither by society nor even by God, but by himself; that there is no authority in moral matters more ultimate than a man's own rational conviction of what is best."

R. B. PERRY, "The Moral Economy," p. 34.

"One could scarcely construct a more erroneous view than that every human being is endowed at birth with the same 'lump sum' of freedom, which remains an inalienable possession throughout life. Our freedom is not complete, it is in the making. . . . The process by which freedom is won is the process of enlightenment. It is the truth that sets men free, the clear perception of moral relations and moral laws, the understanding of human nature and its true needs."

W. G. EVERETT, "Moral Values," pp. 358–9.

One of the most revolutionary changes which the scientific study of psychology has wrought consists in the demolition of all the barriers which formerly divided the body from the mind. The intellect,

once securely enthroned as the highest faculty in the mental hierarchy; the reason, erstwhile religiously devoted to the contemplation of pure truth; and the will, which formerly completed this trio of sublime, unitary faculties, have, in the unbiased and careful scrutiny of laboratory science, been shown to be not only highly complicated processes, but products of experience as well; and not only products of experience, but functions of brain and gland. Furthermore, they have been revealed to be not solely functions of a biological mechanism controlled by external stimuli, but also in a larger sense they are now regarded as means by which the body of a man adjusts itself to and gains control of its physical and social environments. No longer do we ask the old question: "Why has the mind a body?" but rather, "Why does the body have a mind?" And the answer is: The body has a mind to enable the body to experiment with its environment so that when it gets what it seems to want, it can know that it has really wanted what it has gotten.

Some results of this highly reconstructive iconoclasm upon ethical thought have already been depicted in the preceding chapters. Here we are soon to see what effect such a doctrine has upon the last two ethical concepts we shall analyze, namely, duty and freedom.

As may have already been divined, a mechanistic ethics on its constructive side does not maintain a pension list for the outworn conceptions of an earlier

day. Consequently, in this place we shall not ask what used to be thought of the "Freedom of the Will," nor shall we quote Wordsworth's "Ode to Duty" as a prologue to our theme. For while only a hundred years ago no ethical teacher could have safely omitted giving great emphasis to the theological setting of these two concepts, today such a treatment would not arouse the slightest "problematic thrill." What used to be called "the Will" is now an obsolete expression;—indeed, ever since Spinoza wrote, it has been regarded as a myth. In its stead, we speak of the individual or particular volitions of men, and we discuss their value in reducing the gap between our liquid matter and its good. Likewise, what was once called the lump-sum of our Duty has now become separated and analyzed into claims, interests, other-regarding sentiments, and the like, each one of which has a history and a real meaning for our flesh-and-blood personality.

All such changes, while perhaps highly disconcerting to those persons who feel that they cannot get along without their "guiding fictions," are really signs of a salutary advance along ethical lines. Once it is realized that what is popularly termed "will-power" is after all only *skill-power,* and that "moral obligation" should be translated into *pragmatic urgency,* it will be plain that only clearly-prevised action-tendencies can properly be called either right or virtuous. It may be true that many a successful action has been performed in the name of a fetich-

istic belief, but who will doubt that an even more profitable action could have been motivated with less waste of the body's energies, had there been correct insight and a frank facing of the facts. As long as people are afraid of life, so long are they bound to allege some false cause of their actions. Conversely, as soon as they realize that they *are* what they *do,* and whenever they learn that their ethical books cannot be balanced by drawing on a phantom bank account, they begin to pile up ethical assets, and to reduce their ethical liabilities.

From our earlier remark that the science of ethics is primarily concerned with what *is* rather than what *ought to be,* it may be difficult to imagine what place the concept of human freedom can have in a mechanistic treatment of the problems of conduct. It might seem easier to foreshadow what will be the fate of the concept of obligation, especially when we realize that oughting is always hypothetical, rather than categorical. For every obligation is specific and particular,—it depends upon conditions, places, times, and persons, just as does every signification of good and bad, and right and wrong. There is no general Ought, as our recent discussion of Kant's categorical imperative clearly implied. When, then, we ask from whom or from what obligation arises, what answer does a mechanistic ethics provide? Some may expect us to make the traditional answer, namely, that it comes from the group, and that the *feeling* of obligation is a variation of the elemental

type of conscience. This sort of an answer is not to be given here. Although the group largely determines how we shall feel with regard to what *ought* to be done, yet the final education of an ethically adult person leaves him with a different mind on this point. Indeed, it is our purpose here not only to show that the concept of ethical freedom is a valid concept for a mechanistic ethics, but also and more particularly that a true conception of ethical obligation depends upon the discovery of what ethical freedom implies. That this involves no paradox will be understood as soon as we comprehend what it means to say that a man is *free*. Herewith we shall state five conditions under which freedom of action is guaranteed.

The first meaning of free action is *action that is physically possible*. I am not now, I never was, and I never shall be free (that is, able) to walk backward and forward at the same time, or to be in Boston and New York simultaneously. Neither can I, while kissing Jennie at her fireside, be also kissing Kate at her doorway a mile from Jennie's house. On the other hand, the man who is sound of limb, sensorially acute, and otherwise endowed with natural capacities, can be said to be free to employ these capacities whenever and wherever the conditions provide the opportunity.

Right here we ask whether this first meaning of freedom does not have an important bearing on the question of ethical obligation. Is it, indeed, not

plain that just as we cannot do what is physically impossible, so there is no valid obligation under these conditions? This, however, is something which the intuitionists and the idealists have persistently ignored, regarding it often as somehow the very acme of virtue to declare as an ideal of conduct something which is totally impossible of realization, and thereby fostering the neurotic temperament instead of ethical enlightenment. Yet it is plain that if, while being unable to do the impossible, I still am pathologically anxious about it, I shall succeed only in accumulating impatience and turmoil, and be forced to get what sour consolation I can from Schopenhauer, or else to "gnaw the file" in some other fashion. Moreover, according to a mechanistic ethics, I am an evil person as long as I waste energy in this fashion, or in demanding consolation for my erroneous sentiment. Not only am I bound to fail, and thereby to create discord rather than relieve it, but I am also losing time and energy which might have gone into more profitable pursuits. On the other hand, while we do not yet say that we are under obligation to perform every physically possible action, yet every valid urgency still lies in that direction.

The second meaning of the word "freedom" is *absence of external restraints* imposed by physical obstacles or generated by human beings. No man is free to act when external hindrances are too great for him to overcome. Thus while it is possible for

a sound man to walk either forward or backward, he cannot keep on walking in a straight line if his path is intercepted by the sheer wall of a hundred-foot cliff, or if some one stronger than himself obstructs his going. Excellent examples of such thwarting occur in the Greek mythology of Hades. Tantalus was forever hindered by the gusts of wind from plucking the fruit from the tree; Sisyphus could not force the stone over the brow of the hill; and the daughters of Danaus lost all the water they carried in their sieves. They were not, therefore, *free* to perform these actions. They may, it is true, have everlastingly *wished* them, but they could not *will* them.

Nevertheless, while many similar hindrances to human action exist, such as the friction-hindrance to perpetual motion, and the wall which kept Pyramus from Thisbe, yet, on the whole, most of the so-called external restraints are far less serious barriers to freedom than we realize. This is not only attested by the magnificent conquests of nature recently made by applied science, but it might also be deduced from the properties of man's protoplasm as modified in his muscular architecture. For protoplasm is liquid, and liquids flow; and man's stream of thought as a derivative of his liquid protoplasm acquires its labile character as a sort of natural right. Just as a liquid under pressure transmits that pressure in all directions, so a man who is made of good protoplasm tends, when confronted by such obstacles as we have

just described, to think, and plan, and experiment, that is, TO FLOW, out of the difficulty. His neuro-muscular equipment also singularly facilitates the turning of his wish into a will. Our muscles do not only contract and relax to produce lever movements in one plane, but they also combine their movements into pronation, supination, and rotation, and these synergic actions enable us to explore the obstacle and almost literally to flow around it. This is also the mechanism by which we puzzle out any problem. The all-or-none principle makes mental analysis always possible and often accurate. Applied to Pyramus, this means that the wall that separates him from Thisbe stimulates him with her aid so variously that he not only rebels and laments, but also starts to explore its surface and its possibilities, with the final result that he vaults it and descends "until he can come at Thisbe's lips more directly." There has always been an abundance of old saws to encourage the bold and the faint-hearted to regard obstacles as merely stepping-stones to future success, but the physiological basis of such maxims we are only beginning to comprehend. In fine, then, when we speak of a permanent obstacle to our actions, we mean it only in so far as we do not also imply some serious deficiency in the quality of our protoplasm.

The relation between this second type of freedom and obligation is very obviously hinted at by the popular maxims on the theme of perseverance.

Moreover, it is historically demonstrable that pragmatic urgency usually increases in direct ratio to the ease with which external restraints can be surmounted. On the other hand, it is gradually becoming recognized that "there are hundreds of thousands of human beings who can by no possibility ever do what is expected of them by society. Society must give over expecting such things." [1] Those who have no power to plan, scheme, or supervise, are consequently not educated enough to appreciate the obligations which such abilities involve.

We may now consider a third meaning of the concept "freedom." *It is exhibited in those actions which we have been so well trained to perform that they occur without any conscious effort whatever.* Accordingly, the man with training and skill is more free than the man who lacks these abilities. If the oboist of a symphony orchestra is too sick to play, only another oboist is free to sit as a substitute at his desk. A plumber will not do. It will be perceived at once that many sorts of skill, even though they be the exclusive possession of one person, may yet be turned to the equal advantage of a great number of people, making them all co-sharers in his freedom. By using the skill of the substitute oboist, for example, both the managers and the patrons of the concert are free to carry out their wishes. The enormous social advantages of most forms of skilful technique require only a passing comment.

[1] George Clarke Cox, "The Public Conscience," p. 25.

Indeed, what we call business and trade are ultimately the bargains we make for each other's skill. And here again the pragmatic urgency implicated by this form of freedom is apparent, not only in the sharing of socially profitable skill, but also in the acquisition of it.

A fourth empirical characterization of freedom may now be considered. For free actions, in addition to those which are physically possible, externally unhindered, and within the range of our skill, are especially *those which some mechanism of the body actually carries out in the manner in which it was originally set to do it.* In popular speech this form of freedom is exemplified by such expressions as, "I was successful," "I was determined to do it, and I did it," or, "The clerk tried to palm off a substitute, but I persevered in getting the original." Such freedom emphatically implies a *continuity in behavior* which is absent in cases where the desire is thwarted or suppressed. The physiological processes which guarantee this form of freedom are interesting to contemplate. As the wish passes over into will, not only are more and more muscle fibers involved in the action-scheme stimulated to their maximum contraction, but also wider and wider synergies of muscular groups are brought into play, until all the available kinetic energy of the body is released along the channel of one final common motor pathway. Moreover, each and every muscle involved in such an action-scheme stimulates, upon

its contraction, a receptor nerve embedded within it, and these circular reflex stimulations automatically reinforce the contractions already begun. This is nature's own contribution to the unification of our personality in the performance of this type of free activity. The whole neuro-muscular architecture involved in such behavior becomes an automatic mechanism for reinforcing the centrifugal bodily posture, and for providing against the wilting of any motor discharge in any single muscle due to its prolonged contraction. Such actions, then, which involve the steady and uninhibited output of energy that we have described we call *free*. They are equally manifested by the cat who springs upon and catches the mouse she has been warily watching, and by the violoncello virtuoso who scurries safely through the cadenza and arrives at the *tutti* without having either produced a "wolf tone" or dropped his bow. It is such action which is connoted by the popular phrase "free will."

The final touch to our delineation of freedom may be added by saying that *only when a man's actions result in enlarging his environment, and in providing him with increasing opportunities for turning his wishes into wills, is he in the highest sense ethically free.* The preceding characterizations of the free man were derived from simply watching him *in the midst* of any of a thousand activities. This last part of the picture is obtained by reckoning the permanent ethical assets which his efforts have provided.

These assets are, moreover, defined in terms of a continuing freedom. For while we are all in a sense free to do anything within our ability, and for which there is the time, the place, and the opportunity, yet only under certain conditions can we follow such an action with another of our own choosing. The liar, the thief, and the slanderer know very well to what an extent their putative freedoms produce antagonists of their own making with whom they must ever thereafter wage a dismal conflict. On the other hand, the man of frankness and a truthful tongue, the man who makes fair bargains with the universe, and the man who can solve his problems without the loss of his own temper or the respect of other persons, is ipso facto equipped with the ability to synergize his muscles repeatedly into freely willed activities. Moreover, while this fifth type of freedom is dependent upon the presence of the other four, its effect upon them is reflexively beneficial, in making more actions physically possible, reducing the external hindrances to them, increasing the skill by which they are performed, and insuring the continuity with which they are carried out. Indeed, we may now identify virtue with the attainment of this last type of freedom, and vice with its loss or decline. Such activity is also right, and its stimulus is a dependable good.

In thus defining the conditions under which human freedom exists, we have, I surmise, also discovered

the secret of ethical obligation, of pragmatic urgency. That is to say, whenever an action is possible, when it is not opposed by restraints beyond a man's power to overcome, when he has the skill with which to perform it, and when he can will it as well as wish it, and when also the performance of this action increases the range of his effectiveness, then, but not till then, can it be said that he *ought* to perform it. The expressions, "I ought," or "I should," henceforth mean: "I imagine that there would be greater freedom if this course of action which I contemplate were to be carried out." Under this new conception of pragmatic urgency, oughting is neither a *vis a tergo,* nor a *vis a fronte,* nor yet Somebody's fiat superadded to the data of ethics, but it is simply the logical resultant of the conditions of such human activity as produces dependable goods. We recognize no valid obligations imposed upon men from above; obligations are rather implicit in any activity which employs a man's skill to satisfy his needs at the same time that it educates his desires.

It is thus plain that there is no fundamental difference between ethics and any other science. Just as the business of physical science is to describe the conditions under which any phenomenon occurs, so the business of ethical science is to ascertain, by a study of the mechanisms of human behavior, the conditions which underlie all of our ethical values. Wisely indeed did Protagoras remark that "Man is

the measure of all things," but it was not until many centuries after this statement had been made that a positively constructive interpretation could be put upon it.

CHAPTER X

THE ACQUISITION OF AN ETHICAL TECHNIQUE

"One of the reasons why pantheistic revery has been so popular is that it seems to offer a painless substitute for genuine spiritual effort. . . . When pushed to a certain point the nature cult always tends towards sham spirituality.

'Oh world as God has made it
All is beauty,
And knowing this is love, and
Love is duty,
What further can be sought for or desired?'

It seems to follow from these lines of Browning, perhaps the most flaccid spiritually in the English language, that to go out and mix oneself up with the landscape is the same as doing one's duty. As a method of salvation this is even easier and more æsthetic than that of the Ancient Mariner, who, it will be remembered, is relieved of the burden of his transgression by admiring the color of water-snakes!"

IRVING BABBITT, "Rousseau and Romanticism."

"Objection: Will not this end in ethical scepticism? Answer: Nothing is further from scepticism than the conception of a reality subject to laws, and of a rational action based on the knowledge of those laws."

L. LEVY-BRÜHL, "Ethics and Moral Science,"
Table of Contents, p. xi.

"In the preceding pages we have no doubt often hurt—but we have hurt to heal. The good surgeon probes deeply in order that he may not have the operation to perform again. Even a minute amount of diseased tissues left behind can prevent the return of vigorous and creative health. Thus what may seem to the anxious patient unnecessary cruelty may be the greatest kindness. A sentimental compromise is never welcomed by the mature judgment of the brave man. And in this day when so many have willingly given their lives for the sake of a human ideal, is it just and right to flinch in the spiritual warfare which confronts our generation? We are seeking nothing less than a renaissance in which men's energies will be wisely and loyally directed to what is greatly human and humanly great. In such a service we must will to be hard on ourselves and on others."

Roy Wood Sellars, "The Next Step in Religion," p. 211.

Little did Descartes dream that his attempt to find truth by the method of candid doubting was a sign that human evolution had "turned a corner," or that the method he employed was to be the precursor of an ethical renaissance. Yet the introduction of this one form of psychological test as a philosophic instrument was an entering wedge of such power that where great darkness had been, much light was shed; and where the stolid inertia of many centuries had existed, movement and life and enlightenment began to appear. But nature is slow, and always takes plenty of time to play its elaborate game; indeed, often nature seems to us to proceed

by circuitous paths where we would make an open right of way. However, even though it was several centuries after Descartes before the first psychological laboratory was founded, the development of thought toward the recognition and use of the psychological method was nevertheless steadily proceeding. Today there is no word we are more wont to conjure with than the word *psychology*. And even if the foolish always use it with derision, yet those who are wise know well to what an extent it is symbolical of a new era of human development, on the threshold of which era we now confidently stand.

What is this psychological method which has so silently become established, and what has it to do with the acquisition of an ethical technique? It is the method of analysis, experiment, and constructive scepticism, which treats all phenomena objectively, that is, by leaving out the personal equation, and by asking not how do we preconceive that things *should* appear, but only how *do* they appear with our personal bias in abeyance.

Such a method, which, by the way, is the essence of psychological science, is very difficult to achieve. Indeed, for many it is constitutionally impossible. The history of physical science records how great were the struggles of men to become objectively-minded even toward their external environment, struggles which have only recently become successful. Witness the fact that for many centuries the alchemists sought for the philosopher's stone, a min-

eral which they falsely preconceived to have the power of transmuting lead into gold; witness the fact that the science of anatomy was for generations denied its birth on account of pious prejudice and taboo; and witness even today that many physical objects are said to be *bewitched* when they fail to operate as expected, and that luck at cards is still stoutly affirmed by otherwise estimable people. Indeed, there are thousands of farmers in the United States who appeal to the methods of divination in planting their crops and shingling their houses. Consequently, it is plain that if the power to become objectively-minded toward the physical world is so rarely attained, it is even more difficult to become detached and un-self-conscious toward the mental and social behavior of our fellow-men. Nevertheless, this method of detachment, of looking at old things with new eyes, is just what hundreds of teachers of psychology are training thousands of students every year to employ; and its salutary effects are being felt in every corner of the civilized world.

To some persons all this may come as a surprise, since the criticism has already been publicly uttered that the study of psychology tends to make one incurably introspective. On these grounds alone the self-styled hard-headed business man often hastily classifies psychology among the foibles of women and poets. This, however, is simply another error due to hostile preconceptions. For even though some

psychologists have fallen into the practice of cultivating Psyche for her own sake, yet their method originated from distinctly other motives. Psychology, it is true, when cultivated by persons constitutionally possessed of an introversive bias, may not always eradicate that bias, any more than will the putting of an army rifle into the hands of a timid man make him forthright into a model top-sergeant.

In another strain, it is sometimes alleged that psychology is simply a new head set upon the body of ancient Roman stoicism. But it must be remembered that the detachment which the Stoics cultivated lacked all the elements of a scientific inquisitiveness. It was marked chiefly by a sweet indifference and unconcern, traits which were derived from the belief that Reason which ruled the world was interested only in the headlines of universal news. The psychologist, far from being indifferent to the most transient phenomena of human experience, regards them most steadfastly. Nevertheless, he endeavors to maintain an equality of interest in all human affairs, knowing full well that as soon as he takes sides, he loses his sense of the proportions of the whole. Unlike the Stoic, he admits the reality and inevitableness of pain and anguish; yet while he studies these phenomena, he keeps a sharp lookout lest his personal equation obtrude itself in the shape of sympathetic sorrows,—these he steadfastly refuses to add to his report of the objective facts. Nevertheless, it is conceivable that had not the ele-

ments of stoic indifference been a basic capacity of human protoplasm, the psychological attitude might not have been evolved.

Curiously enough, psychology has been both defended and attacked on the basis of its supposed kinship with certain doctrines of Jesus, as, for example, the Golden Rule. No psychologist is greatly interested in any debate carried out on these lines. When Edwin Holt's "The Freudian Wish" first appeared a few years ago, some caustic reviewer accused its author of "having gotten religion in the form of Freud." It is doubtful whether anyone, be he Christian or non-Christian, would regard such a remark either as a help or a hindrance to the acceptance of psychology as a contribution to the technique of ethics. As far as the Golden Rule is concerned, its relations to scientific method may be briefly indicated by saying that while this maxim can be interpreted to imply a kind of other-regard which seems to possess the elements of scientific detachment, yet other things must also be considered before final judgment is passed. For this hypothetical imperative,—"*Whatsoever ye would* that men should do unto you, do ye even so unto them,"—is only possible of application among equals of intellect or of sentiment, and it can be used then only by a forehanded and judicious person, one with discriminative sympathies, and able to mature his wishes into wills. Psychology ventures to make no universal rules of conduct, especially since it must first take

an inventory of human nature in order to find out what rules there are to which man will give his uncoerced and unconscious loyalty.

Let it not be assumed, however, that the psychologist urges an ethical moratorium while he is pursuing his search into the secret places of human nature. The method of scientific detachment has itself provided such an insight into the problems of conduct as to make any such assumption absurd. He who catches a glimpse of what it means to understand his fellow-men, rather than to regard them primarily as creatures to be classified as either good or bad, virtuous or vicious, begins to grow into an ethically adult person. He at once loses that ancient, clandestine, stultifying tendency to obtrude his own bias into his social environment, and he no longer finds his chief comfort in adoring those who are most like unto himself, or in mentally lynching in advance those who rub his ego the wrong way. Scientific neutrality hath also its victories. The application of the psychological method to prison reform, where the criminal is regarded as an effect as well as a cause of social mal-adjustments, has already been acknowledged as humanly great. Is it not possible that we see in such phenomena the passing of an age in which maxims were necessary, and the birth of an era where the educative methods of wise and kind men will take their places?

The further drift of this would be hard, indeed, to conceal. Ethics as a branch of psychology is

inevitably bound up with the abolition of praise and blame, and of reward and punishment, as the chief themes in the judgments we pass upon our fellowmen. The tendency to make such bi-polar judgments usually implies a prejudice inherited from a prescientific age. With this change, of course, many of the traditional moral categories will be replaced by the true categories of the understanding,—categories derived from psychological insight into the ethical potentialities of the natural man. Even now, however, such a replacement is in progress, the results of which are neither small nor unimportant.

We refer here to the wide-spread use of trait analyses, both in business and in education, by which a man is estimated on the basis of his tendencies, capacities, and powers. His body is measured for its strength and resiliency, and where defects are discovered, a regimen leading to the re-education of his physique is prescribed. His mental developments are tested, and the common attributes of the human mind, such as sensory acuity, retention, discrimination, and the like, are estimated and recorded. The special talents he possesses are revealed by performance tests, and his hitherto undeveloped potentialities are induced to betray themselves. The emotions from which he either profits or suffers are discovered by methods adroitly devised for the purpose. Likewise, the individual's sociability,—whether it be merely gang-attachment, or a zest for cooperative endeavors,—is made a matter

of sympathetic study; while still other bases upon which a man may be estimated are employed in the attempt to help him find out just what manner of man he is.

While it is admitted that physical and mental tests are often stupidly devised and bigotedly inflicted on the testee, yet it seems likely that we have given here a method which can be employed to the greatest advantage even in every-day ethics. For the psychological method, in that it teaches one first to become analytical and discriminative, replaces the old, unfounded prejudice that men are unequivocally either good or bad, virtuous or vicious, saints or sinners, by a desire to know just what can be done with and for them. And while the methods of psychology will probably always rank men on a scale from low to high, and will always employ opposite poles in its judgments, yet in the multitude of such antonyms there is safety. Scientific judgments are, by being unemotional, devoid both of that extreme congratulation and sharp censure which attach to purely moral estimates, while the wide range of observation upon which they are made provides for the greatest number of human contacts and of educative measures possible. To extol a man is often not much different in effect than to blame him, and both praise and blame can equally hinder his power to acquire an ethical technique. Men differ too variously to be fitted to any one Procrustean bed; the human mind has infinitely

more than two dimensions. Moreover, the moralist's use of bi-polar judgments tends inevitably to separate men, rather than to unite them, or to teach them to cooperate with one another. And when we consider that from now on, at least, the predicaments of this planet will be common liabilities of the whole human race, the pragmatic urgency to employ the methods of psychology in attaining social harmony are undisguisedly patent.

The benefits derived from employing the psychological method in ethics are, however, by no means exclusively social. The use of this method reacts directly upon the user in several significant ways. In the first place, the man who employs even as few as twenty-five of the newer categories in making a trait analysis of his fellows, soon becomes aware of the fact that his former analysis of himself is in need of revision. Exaggerated self-preference is thus broken down, and replaced, not by its opposite,—self-abasement,—but by an estimate which arises from comparisons and contrasts resulting from the use of an objective standard. Again, the user of this method learns that human behavior is not the product of some mysterious mental element called "character," but that character itself is the product of traits, and, furthermore, that every trait has had a developmental history, which is at every point a record of the effect of environmental stimulus upon original nature. His own character thereafter becomes subject to scientific scrutiny, and he

realizes, for example, that his previous emotional repugnances were not always signs of incorruptibility, but very frequently, indeed, signs of the extent to which his own desires had been prevented from reaching their maturity. And, only to mention one more of the many benefits of such new scientific insight, the use of this method reveals that times out of number purely moral judgments are employed to quench, rather than to quicken thought, and are uttered not so much to indicate that discriminative sympathies are being acquired, as to show that they have long since ceased to germinate. Henceforth the employment of the psychological method goes hand in hand with the urgency to prevent as many young minds as possible from suffering on account of a retarded development.

Such a change of emphasis from traditional morals to scientific methods implies unequivocally that the problems of ethics are henceforth to be solved by experts. Already the recognition of the need of such a change is evident in the reliance that is being placed upon psychiatrists and other medical men to assist in the cure of those who are maladjusted to their environment. Health-clinics likewise are being both promoted and attended by those who realize that the virtues go as deep as the viscera, and that often such things as ignorance of the shape of one's stomach have been the source of many a lapse from normality. This reliance upon trained experts is, moreover, a sign of still further

changes in our occidental philosophy of life. It means that we are acquiring the conviction that constructive criticism is better than ritual, and analysis more efficacious than prayer. For we have begun to see that progress must come by honest, painstaking efforts in the here and now, rather than by presuming upon the perfection of a universe which we have only begun to understand. It is indeed the well-born sentiment of many thousands of people today that science wisely employed for the benefit and use of men is the only true word of God.

Herewith, also, the question of what sort of ideals an applied mechanistic psychology of conduct provides may have an answer. On this point we need not be dumb, nor can we make a "sentimental compromise." When the mechanist asserts that we *are* what we *do,* he does not thereby denounce ideals; on the contrary, he thus only affirms his purpose to take the whole question of ideals seriously, more seriously, in fact, than it was ever taken before. Herein also he declares for the Ethics of Hercules rather than the "Ethics of Cinderella." For while he must admit that there is, accordingly, no class of people who can be truthfully said to be "the pure in heart,"—owing to the fatigue of attention incident to all other-worldly contemplation,—yet he also asserts that the man who knows his capacities and powers as the result of an objective analysis, is by that means equipped to advance to more inclusive levels of conduct than he who merely cul-

tivates an inner life of private mystery. The mechanist would therefore let new standards grow out of the development of natural human capacities, out of the struggle to educate men so that their desires and abilities mature simultaneously, and out of the freedom which can thus be achieved by those able to achieve it.

"Great love comes from great knowledge," said Leonardo da Vinci, and the advance of science today in all its branches corroborates this assertion. Although at the present hour it does not seem clear just what the universe is doing, yet they who recognize even in seemingly disastrous tumults the struggles of man to enlarge his power to think, will see that even if nature's way appears to be circuitous and even at times crude, it is nevertheless nature's inevitable way. Much lamentation is heard today over the changes which evolution has brought to this planet, and the outcry is even raised that science has taken away our souls. Is it necessary to reply that a faith in stagnation is clearly out of joint with the creative functions of time, or that the loss of an ancient belief may be the sign of a truly ethical advance? Indeed, we can well be assured that the type of soul which is composed of self-stifled desires, of restless sentiments due to an ignoble retreat from reality, of the fear of ultimate annihilation, not only *will* die, but it also *ought* to die. There is another and a better kind of soul,—the one created out of sagacity, skill, and kindness,

which generates power, wisdom, and peace,—and this type of soul, as long as the sun remains hot, and the earth's crust keeps flowering into men, will have its immortality guaranteed. This is the mechanist's religion,—a consequence of, rather than an apology for, his ethics. For religion, though it be a word made base by those who claim to have an endless copyright on truth, and a retroactive monopoly on the deeper human emotions, means to a mechanist something more closely allied to its original signification. It means a reliance on that much of nature, and a support from that much of humanity, as contributes to the development of a man's talents, to the freedom of his actions, and to his peace of mind. The new labors of Hercules will consist in making this true for the whole human race.

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